

5'

ACCGCATCGAACTCCGCTTGATCATCCTCAGGTAGGTCGCTAGTTTCATAAACATCTGGCTCATTCCCTGGCCTGCAGGTAGAAGC  
TGGCGTAGCTTGAGGCGAACTAGTAGGAGTCCATCCAGCGATCAAAGTATTTGTAGACCGAGTAAGGACCGGACGTCCATCTTCG

85

KIF5A



AGTGACCACCCAACCTCACTACCCAGCATCCAACAACACCCCTTCCCCACTCCATTTGAATAAGCTAACAGAGAAGGCGGGGTG  
TCACTGGTGGGTTGGAGTGATGGGTCGTAGGTTGTTGTGGGGAAAGGGGGTGAGGTAAACTTATTTCGATTGTCTCTTCCGCCCCAC

170

KIF5A



TGATGTCAGGGTTCTGTCTTTCTCCTCCACCTGCCCGTGAGTCAACAGTATGTCAGTTCCCATGTCTCAAGGGGTAGGGATGA  
ACTACAGTCCCAAGACAGGAAAGAGGAGGTGGACGGGGCACTCAGTTGTATACAGTCAAGGGTACAGAGTTCCCCATCCCTACT

255

KIF5A



CAGCGGAAACAATTGGGACCTGACAGTAAACGGTGAGTGTAAGTGATAGCAACGATGTTACCCTAAATCTAGAGGCGGGCAGGTC  
GTCGCCTTTGTTAACCTGGACTGTCAATTTGCCACTCACATTCATATCGTTGCTACAATGGGATTTAGATCTCCGCCCGTCCAG

340

KIF5A



CTTGGCAATCACTATTGCCAAAGAAGGTGAAGGCTATCCTCCAATTAGGCCCGTACACCACCACCCTGGCACAAGGATTGAGAG  
GAACCGTTAGTGATAACGGTTTCTTCCACTTCCGATAGGAGGTTAATCCGGGGCATGTGGTGGTGGGACCGTGTTCCTAACTCTC

425

KIF5A



TGACTCAGGACCTTAGTACTCAAGGTCCTGTGTCCCAACCCTCACCTTGAGAAGCAGGCAGGGCAGCACAAAAGGAAGGTACACG  
ACTGAGTCTTGGAAATCATGAGTTCAGGACACAGGGTTGGGAGTGGAACCTTTCGTCCGTCCCGTCTGTGTTTTCTTCCATGTGC

510

KIF5A



CCAGGATTGTCATGGGAGTGGGGGCTGGGGGAGGGGCATAGGTTCCCTCAAGGATAGAGCTCCCATCTGGCACAAGAGGGTTCTG  
GGTCTTAACAGTACCCTCACCCCCGACCCCTCCCGTATCCAAGGGAGTTTCTATCTCGAGGGGTAGACCGTGTCTCCCAAGAC

595

KIF5A



CCAGATGGCAGAACCTCTTCTTGGCAGGATGAAGGCCATCGTTAAGTGGTCTGGTGTGTGTCTGGGGTAGCGATGGGGTCTT  
GGTCTACCGTCTTGGAGAAGGAACCGTCTACTTCCGGTAGCAATTCACCAGACCACACACACAGACCCCATCGCTACCCAGAA

680

KIF5A



ATGGAGAGATTTGGGGGGGACATGGGAGGCGTTGACACGGATGGTGGAAAACTCAGGCACAAGAGGTCAGTACCCGGAGTCGAT  
TACCTCTCTAAACCCCCCTGTACCCTCCGCAACTGTGCCTACCACCTTTTTGAGTCCGTGTTCTCCAGTCATGGGCCTCAGCTA

765

KIF5A



TTCTGGGCCGAGCTACCGGCGACTGCCGAAAGGGGGCCTGGTGCGCCGTCCGGCGGCCCGGCCAGTCGGGTGAGAAAGATTTCG  
AAGACCCGGCTCGATGGCCGCTGACGGCCTTTCCCCCGGACCACGCGGCAGGCCGCCGGGCCGGGTGAGCCAGTCTTCTCAAGC

850

KIF5A



GGGGGTGCTGAGGCCGATCGGAGAACGAGCGGCGGGAGCCCTTGGGCGGAGGATGGGCTGCAGGCGGGAGGGGTGCGGGCTGGT  
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935

KIF5A



TTCTGCTGGGGTCTTGGGAGGTCGGGGGCGGGTCTGGGGAGCCGGGGCCGGTCTGTACTCACAATGCCGGGAAGGTCGGC  
AAGACGACCCCCAGGAACCTCCAGCCCCGCGCCAGGACCCCTCGGCCCGGCCAGGACATGAGTGTTACGGCCTTCCAGCCG

1020

KIF5A



GTATTTAGGGTCCGCCATGGCGGCGGCGAGACGGGCTGGGGGACCCGGGCCTCGGTGGAGCCGGGGCCGGTGTTCGGGTAGGGGA  
CATAAATCCAGGCGGTACCGCCGCGCTCTGCCCGACCCCTGGGCCCGGAGCCACCTCGGCCCGGCCACAAGCCATCCCCT

1105

KIF5A



GAGGCTGGGTTTCGGGTCCCGGGCTAAGGCGGGCGGCAAAGGGAGCGGCAGATGAGCAGGAAGTCTCGCGACAGCAGTAGCACAGCA  
CTCCGACCCAAGCCCAGGGCCCGATTCCGCGCCGCGTTTCCCTCGCCGCTACTCTGTCCTTCAGAGCGCTGTCTGTCATCGTGTCTGT  
KIF5A >

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KIF5A >

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KIF5A >

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KIF5A >

CCCAGGAATAAAATGACTAGATTAATGATACAGGTAGTCATACTGTGACACAGCCGGGGTTTCAAAAACAAGAAGTTTGCTTGA  
GGGTCTTATTTTTACTGATCTAATTTACTATGTCCATCAGTATGACACTGTGTCTGGCCCCAAAGTTTTTTGTTCTTCAAACGAACT  
KIF5A >

TACTGTGTATTATAAAAAACAAAATAAAAAACAAGAAGTAAAATTTAGTAAACGCGTAGTGTATGTTAGGAATGAAAAAGTTAGGCA  
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KIF5A >

ATCTTCTCAAGTAAGGGCTTTCAGATAATTTGAATTTTCAGATAATAAGTAGGTGTGTGTGTGTGGTGTGTGGTGTGTGGGTATAC  
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KIF5A >

TAACCCCCAAAAATTAAGTATCTGAAATTCACATTTAACTGGGCATCCTGTTTTGTTTTGTTTTGTTTTCAAATCTGGCAATTCT  
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KIF5A >

ATCTGAAGTTCATAAGTAGGTAAGTGGTGTCTCCATGTCTGTCTGAACACTCTCTGGGCTCTTAACTACTTCGTTAATAGTTCTC  
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KIF5A >

AGACTTTTATTTATTTTTCAATTTTTCAATTTTGTGGGTACACAGTAGGTGTATGTATTTATGGGACACATGAGATATTTTATGAT  
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KIF5A >

ACAGGCATGCAATGTGAAATAAGCACATCATGGAGAAGAGGGTATCCATCCTCTCAAGCATTTATCCTTTAAGTTACAAATAATC  
TGTCCGTACGTTACACTTTTATTCGTGTAGTACCTCTTCTCCCATAGGTAGGAGAGTTCGTAAATAGGAAATTCAATGTTTATTAG  
KIF5A >

CAATTACTCTTTAAGTTATTTTTAAAATGTACAGTTGAGTTATTCTTGACTATAGTCACCCTATTGTGCCATCAAATAGTAGGTCT  
GTTAATGAGAAATTCAATAAAAATTTTACATGTCAACTCAATAAGAACTGATATCAGTGGGATAACACGGTAGTTTTATCATCCAGA  
KIF5A >

TATTATACTTTCTAATTTTTTGTACCTATTCACCAACCTTACCTTCCGTTCTCAGACTTTTTAAATTTTCATCGTTCAATAAAATTA  
ATAATATGAAAGATTAAAAACATGGATAAGTGGTTGGAATGGAAGGCAAGAGTCTGAAAAATTTAAAGTAGCAAGTTATTTTAAAT  
KIF5A >

AAACAAC TACA AACCTTGAAGATTTGCCTTTTTATTTTATCAAGTAAGTATATTACAAATAGAAAACCTATTATTTACTGTCACC  
TTTGTTGATGTTTGGAACTTCTAAACGGAAAAATAAAATAGTTCATTTCATATAATGTTTATCTTTTGGATAATAAATGACAGTGG  
KIF5A

2295

ATCATTACTTGGTAGAAAAGCAAGAAGGACACACTCAGAATAAAAGATAGTCCTTTGAAACTTATCAAATCCATCTTTATATTA  
TAGTAATGAACCATCTTTTTCGTTCCTCCTGTGTGAGTCTTATTTTCTATCAGGAAACTTTGAATAGTTTGGTAGAAATATAATT  
KIF5A

2380

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TTTTTTTGGAGTGGTAACAAGAAAACCTCCACTCCCCTATGAGTCACTTGAAAACAGAGACTGGTCACTGGGAGGTACCTGACCCT  
KIF5A

2465

TTTTGAAACCCCTTACTAAAGATGCCACCTTGGAGCCCCTGGGGACCCAAGGATGGGATGTTTCCCAGGATGTTTCTGAGCTT  
AAAACCTTTGGGGAAATGATTTCTACGGTGGAACCTCGGGGACCCCTGGGTTCTACCTACAAAGGGTCTACAAAGGACTCGAA  
KIF5A

2550

GCAGGATGCTGCAACACTTAGAAATTGTGCCAAACCAAGTGACTAGAGAGTTCCTGAGTTCGGAACCTCGTTGTCTTTCTTTCTCC  
CGTCTACGACGTTGTGAATCTTTAACACGGTTTGGTTCACTGATCTCTCAAGGACTCAAGCCTTGAGCAACAGAAAAGAAAGAGG  
KIF5A

2635

TGGCTCCTCCCAAGCCTCTATCCCTTTCTCCATAGTCTTACAGCTTTCTGTCCCATTCCTTATGTTGGACTCTTTTCTTTTCAG  
ACCGAGGAGGGGTTTCGGAGATAGGGAAAGAGGTATCAGGATGTCGAAAGGACAGGGTAAGGAATACAACCTGAGAAAAGAAAGTC  
KIF5A

2720

TTCCCTTAAGATTCAAGGTAGGTTAGAGGTGTAGCCCAATGTGGGAAACCCCTGAGTTCTGAATAGTTAGGTCTTGTCTGGCC  
AAGGGAAATCTAAGTTCCATCCAATCTCCACATCGGGGTTACACCCTTTGGGGGACTCAAGACTTATCAATCCAGAACAGACCGG  
KIF5A

2805

AGGCTATCAGCCTCTTACTTTTGTCCCATAGTGTCTTAAAGTGACCTTAACCACTCACCAGACAGTTGCTGAGCAGAACTTTCTTT  
TCCGATAGTCGGAGAATGAAAACAGGGTATCACAGAATTCAGTGAATTTGGTGAGTGGTCTGTCAACGACTCGTCTTGAAAGGAA  
KIF5A

2890

TCCTCCTCCTTCTCCCATCCACCCTGCCCTTCTCTTTGCCTAGAACCTCAACTCCTGCAGTCCAACCTCTCTGTTGGCCAGCAGA  
AGGAGGAGGAAGAGGGTAGGTGGGACGGGAAGGAGAAACGGATCTTGGAGTTGAGGACGTCAGGTTGAGAGACAACCGGTCGTCT  
KIF5A

2975

GGCCTGTGACATGGAGAAAAATCAATTTGGCCAGCTTCTTGGTGTTCTTTCCAGGGGCTGCAGCAGGAGTCTGACCCAAAGGAA  
CCGGACACTGTACCTCTTTTTAGTTAAACCGGTGGAAGAACCACCAAGAAAGGTCCTCCGACGTCGTCTCAGACTGGGTTTTCTTT  
KIF5A

3060

GGAAGGACAAGGAATCTCTGGGCTTGGCATTCTTTCTGTTTTTCTTCCCCACACCTTTTTTTTTTTGGCCAGGGAAAGGGGGCTG  
CCTTCTGTTCTTTAGAGACCCGAACCGTAAAGAAAGCAAAAAGAAGGGGGTGTGGAAAAAACCCTTCCCTTCCCCGAC  
KIF5A

3145

AAGTATTGGGACTCTATCCTCCAATGGTTACTGAGACAGAAAACACACACTCCCGTAGGTATCTGAATTTGCCTGAAACCCAAAT  
TTCATAACCCTGAGATAGGAGGTTACCAATGACTCTGTCTTTTGTGTGTGAGGGCATCCATAGACTTAAACGGACTTTGGGTTTA  
KIF5A

3230

GCCGGCTTTGCCTCAGACTTCAAAGTCTCTCTGGCCTTACCCATCCCCATCATTGCCCTCCTTCACTGCTTTCTGACTCCCTTT  
CGGCCGAAACGGAGTCTGAAGTTTCAAGAGAGACCGGAATGGGTAGGGGTAGTAACGGGGAGGAAGTGACGAAAGACTGAGGGGAAA  
KIF5A

3315

CTCTTGCAAAGATGTTTTCCACCCATCTTCTCCCATCTCAGCCTAGGACACAAAAATAAGTATTGTATCTGCTTTTTGAATTCC  
GAGAACGTTTTCTACAAAGGGTGGGTAGAAAGGAGGGTAGGAGTTCGGATCCTGTGTTTTTATTTCATAACATAGACGAAAACTTAAGG  
KIF5A

3400

CATAACCCAGAATGGGAGTTTATCTTCCCTGAAACTGGGGACCTGGTGTGTACGTTGGGGAGACAGTATAGTGCACCTTTGGATG  
GTATTGGGTCTTACCCTCAAATAGAAGGGACTTTGACCCCTGGACCACACATGCAACCCCTCTGTTCATATCACGTGGAAACCTAC  
KIF5A

3485

TGGAAGGGGAAGGGAGTAGCCAGAACCTCCACGACACCCAACTTCATAGGAGTACAGGCAGGGGTCCCCCAGAAAAGCTGAGTG  
ACCTTCCCTTCCCTCATCGGTCTTGGAGGGTGTCTGTGGGTTGAAGTATCCTCATGTCCGTCCCCAGGGGGGTCTTTCGACTCAC  
KIF5A

3570

GGTTGGGAGTCCAGCTTCCGTGCATGTGGGGCATGGGATGGGCGTAGGGGGAGAATGAGAAGTGTGATCCCAGTTTGGAGAGAGG  
CCAACCCCTCAGGTCGAAGGCACGTACACCCCGTACCCTACCCGCATCCCCCTCTTACTCTTACACTAGGGTCAAACCTCTCTCC  
KIF5A

3655

ACTGTGACGGGTTGGGGGATGCCCTGGAATAAAGGGAGAGGGAGATCTGTTGACCCTTTTTCGCTACACAGGCGACAGGCCACCT  
TGACACTGCCCAACCCCTACGGGACCTTATTTCCCTCTCCCTCTAGACAACCTGGGAAAAGCGATGTGTCCGCTGTCCGGGTGGA  
KIF5A

3740

CAGTCCCCTTATCCCTTCCAGGGGGTGGAGTCTGAGGGAGGGACAAACAGGTCGGGGGTATAGGGGTGGGATGCAGTGAGTTGGG  
GTCAGGGGAATAGGGAAGGTCCCCCACCTCAGACTCCCTCCCTGTTTGTCCAGCCCCATATCCCCACCCTACGTCACTCAACCC  
KIF5A

3825

TGGGGAAGGGTTCGAGGGCAAGGTTATCTCCGAACGTTAGGGGTGGGGGAGGGAGGAGAGCGGTGAGGTTCCACCCTTCGGGG  
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KIF5A

3910

GTCGACGTCGAGCCAGCGTCCCCAGTGGAGGGAGCCCCGCCCCGCTCCTCCATCGCGGCCCGCCAGGCCCGCAGCGCGGCGC  
CAGCTGCAGCTCGGTTCGAGGGGTACCTCCCTCGGGGCGGGGGCGAGGAGGTAGCGCCGGGGCGGGTCCGGGCGTTCGCGCCGCG  
KIF5A

3995

TGCAGCGGAGGGGCGGAGAGGCAGAGAGCCGAAAGGACCAGACGCCAGGTCGCCCGCATCCCGCTGCCGCAGGAGAGAGACA  
ACGTTCGCGCTCCCCGCTCTCCGTCTCTCGGGCTTTCTGTTCTGCGGGTCCAGCGGGCGTAGGGCGACGGCGTCTCTCTCTGT  
KIF5A

4080

KIF5A-202

GCGCGCCCCGGCCCTGCTCCCCAGGCTTCGCCCGGGCGCCCTCAACTCTGTCCCCAGAGACTGAGCACCTGTCTCTCCGCTCGGC  
CGCGCGGGGCGGGACGAGGGGTCCGAAGCGGGCCCGGGGAGTTGAGACAGGGGTCTCTGACTCGTGGACAGGAGGGCGGAGCCG  
KIF5A

4165

KIF5A-202

CTCTGCTGAGAGCCCTCTCCTCTGGAGCACACACCACCCCTGCAGCCCAAGAAGAGTCCAGCCCCACGCCGGCTACCACCATGG  
GAGACGACTCTCGGGAGAGGAGACCTCGTGTGTGGTGGGGACGTCGGGTTCTTCTCAGGGTCGGGGTGCGGCCGATGGTGGTACC  
KIF5A

4250

KIF5A-202

CGGAGACCAACAACGAATGTAGCATCAAGGTGCTCTGCCGATTCCGGCCCTGAACCAGGCTGAGATTCTGCGGGGAGACAAAGTT  
GCCTCTGGTTGTTGCTTACATCGTAGTTCCACGAGACGGCTAAGGCCGGGGACTTGGTCCGACTCTAAGACGCCCTCTGTTCAA

4335

KIF5A

KIF5A-202

A E T N N E C S I K V L C R F R P L N Q A E I L R G D K F

ENSE00001264380

KIF5A-202

CATCCCCATTTTCCAAGGGGACGACAGCGTCGTTATTGGGGTGAGTGTCCGCCAGGAGGGAATTCGGGGAGGGGGCAGGTGGCTG  
GTAGGGGTAAAAGGTTCCCTGCTGTCGCAGCAATAACCCCACTCACAGCGGGTCCCTCCCTTAAGCCCTCCCCCGTCCACCGAC

4420

KIF5A

KIF5A-202

I P I F Q G D D S V V I G

ENSE00001264380

KIF5A-202

AATCTCCCCGCCCCCGCAGAGCCTTAGTCTCTGCTGGTCCCTTTGCTCCCCCTCCCCGCGCTCATCCTTCATCCTCTTCCCCG  
TTAGAGGGGCGGGGGCGTCTCGGAATCAGAGACGACCAGGGAAACGAGGGGGAGGGGGCGGCGAGTAGGAAGTAGGAGAAGGGGC

4505

KIF5A

KIF5A-202

KIF5A-202

CAGCCCCCTCTCTCCCTGCAATCAGGATGGCTGGGTGTGGCCTGGCCAGGCCAGCGGCCGAGTCTCTGCAGAGTGGCAGGGGGCT  
GTCGGGGAGGAGAGGGGACGTAGTCCTACCGACCCACACCGGACCGGTCCGGTCCGCCGGCTCAGAGACGTCTCACCGTCCCCCGA

4590

KIF5A

KIF5A-202

KIF5A-202

GCTTTCCTACCTTCGGGAGATCCAACCTCCCTTTGCTGCTGTCTGCAGCGTCTCCACCCGTTAGAACCAGTCCCATGTTTTTCTG  
CGAAAGGATGGAAGCCCTCTAGGTTGAGGGGAAACGACGACAGACGTCCGAGAGGTGGGCAATCTTGGTCAGGGGTACAAAAGAC

4675

KIF5A

KIF5A-202

KIF5A-202

ATGTTTTCCCTTCTCCACCACCCGCTCCCCAAGAGAAAAGCGCATCTTCCCTTTGTTATTGGCTCAGATCTCTACCCCCACCTCC  
TACAAAAGGGGAAGAGGTGGTGGGCGAGGGGTTCTTTTCGCGTAGAAGGGAAACAATAACCGAGTCTAGAGATGGGGGTGGAGG

4760

KIF5A

KIF5A-202

KIF5A-202

CGGAAGGTAAGGCGGAAGACTTTTGGGTGGATTAGATGGGAGGTGAGCAGTCCAGGGTCTCTGCAGAGTGTGGATGGAAGTGGGC  
GCCTTCCATTCCGCCTTCTGAAAACCCACCTAATCTACCCTCCACTCGTCAGGTCCCAGAGACGTCTCACACCTACCTTCAACCG

4845

KIF5A

KIF5A-202

KIF5A-202

TCTAAGACCAAACCTTCCATCATTCCCTAAAGTAGTTATAGCCTGGATTTTTGTGTGTGTGTTGTGGGGAGTAGGTCTGATGCAG  
AGATTCTGGTTTGGGAAGGTAGTAAGGGATTTTCATCAATATCGGACCTAAAAACACACACACAACACCCCTCATCCAGACTACGTC

4930

KIF5A

KIF5A-202

KIF5A-202

GGTTTACTGGGAAAGAAATCATTGATGCCACACCCAATCTTGGGGGGAGCCTCTGGAATCCTAAGGTCAGGTCTGCCTTTTGGTC  
CCAAATGACCCTTTCTTTAGTAACTACGGTGTGGGTTAGAACCCCTCGGAGACCTTAGGATTCCAGTCCAGACGGAAAACAG

5015

KIF5A

KIF5A-202

KIF5A-202

CCAGGTACAGTAGGAAGAGGGTTTCAGATTCCCCAACTGACCCCTAAAGAAAAATGCCCAAACCTGAGATCCTAGTCAGTAC  
GGTCCATGTTCATCCTTCTCCCAAAGTCTAAGGGGTTGACTGGGGGGATTCTTTTTACGGGTTTGGGACTCTAGGATCAGTCATG

5100

KIF5A

KIF5A-202

KIF5A-202

CTGCTTATTCATCCTTTCTCTTGAGGATCCAATAGAAAAGTAGCCATCCAGCTCTACCTCATCATGACAGCCCTACCCAAGGAGGA  
GACGAATAAGTAGGAAAGAGAACTCCTAGGTTATCTTTTCATCGGTAGGTCGAGATGGAGTAGTACTGTCGGGATGGGTTCTCCT

5185

KIF5A

KIF5A-202

KIF5A-202

TATCTTAAGGGAACATAATTAACAGTGGGCCTGTTACTCTACGTATATTATTTAACCCCAAAACAACATTCAGAAGTAGTATC  
ATAGAATTCCTTGATTATAATTGTCAACCGGACAATGAGATGCATATAATAAATTGGGGGTTTTGTTGTAAGTCTTCATCATAG

5270

KIF5A

KIF5A-202

KIF5A-202

AATATTTCCATTTTACAGATGCAGAAATTGAGGCCCAAAGAACTTGAATAACTTTCTCAAGGTCATGCTATTCATCCATGGATCT  
TTATAAAGGTAAAATGTCTACGTCTTTAACTCCGGGTTTCTTGAACCTATTGAAAAGAGTTCCAGTACGATAAGTAGGTACCTAGA

5355

KIF5A

KIF5A-202

KIF5A-202

GAACCTAAATCTGTGACTGCAAACCTCCCATCTCTTCTATCACATTGCCTACCCAGGTTTCTGTTCTGCACCTTTATCTGTAATG  
CTTGGATTTAGACACTGACGTTTGGAGGGTAGAGAAGATAGTGTAAACGGATGGGTCCAAAGACAAGACGTGGAAATAGACATTAC

5440

KIF5A

KIF5A-202

KIF5A-202

GCCCAAAGGGAAATTTCTAGGCCTTGCCCACTCCCCCTGAGGTTGGTAGGGACCTCAGGCTGTGTGTGGGGAGAAAAGATCTGGGG  
CGGGTTTTCCCTTTAAGATCCGGAACGGGTGAGGGGGGACTCCAACCATCCCTGGAGTCCGACACACACCCCTCTTTTCTAGACCCC

5525

KIF5A

KIF5A-202

KIF5A-202

TCGAGTCCTGTAGGGCTTGAGGGGTGCTGGGCCAGGAAACAAAACTAGCTTGAGGAGGGAGGGGCATGTACGAGGGCAGTCAAG  
AGCTCAGGACATCCCGAACTCCCCACGACCCGGTCTTTGTTTTGATCGAACTCCTCCCTCCCCGTACATGCTCCCGTCAAGTTC

5610

KIF5A

KIF5A-202

KIF5A-202

GTCAGAGGTGCTTCTTATGTATCTTTATCCACAGTGCTTGGCACAGAGCACCTGGACACAGGCTTGTTAAAGGAATGAAGGAAAG  
CAGTCTCCACGAAGAATACATAGAAATAGGTGTACGAACCGTGTCTCGTGGACCTGTGTCCGAACAATTTCTTACTTCTTTTC

5695

KIF5A

KIF5A-202

KIF5A-202

AAGGGGAGGAAGCCTGGGCCTTCTGAGTCAGTGAGAATGGGACTTTGAATAAACATGCTTCGGGGGAGACCTGCTTACCAGTCCC  
TTCCCTCCTTCGGACCCGGAAGACTCAGTCACTCTTACCCTGAAACTTATTTGTACGAAGCCCCCTCTGGACGAATGGTCAGGG

5780

KIF5A

KIF5A-202

KIF5A-202

CAAGGGCCCCAGTCTGTCAACACCTTGACCCCTTACCCACACTGTTAACTCAAATGGATGCTTTTTGGTCTCTCTCTCTCTCTC  
GTTCCCGGGGTCAGACAGTGGTGGAAACGTGGGAATGGGTGTGACAATTGAGTTTACCTACGAAAACCAGAGAGAGAGAGAGAGAG

5865

KIF5A

KIF5A-202

KIF5A-202

TCTCTCTCTCTCTCTGTGTATGTATTTGCCACATGGAGAGGGCCTCTGTTTCTTTTTGCTTCAGGGACCTCGCTGGCCCTGCA  
AGAGAGAGAGAGAGAGACACATACATAAACGGTGTACCTCTCCCGGAGACAAAAGAAAAACGAAGTCCCTGGAGCGACCGGGACGT

5950

KIF5A

KIF5A-202

KIF5A-202

GTCTGTTTCAGTCTGGCTGGGCTAAAAACAAAACAAAACAAAACAAAACAACCACAAAACAACCTCCTGGATCAACTCTGGAGGACC  
CAGACAAGTCAGACCGACCCGATTTTTGTTTTGTTTTGTTTTGTTTTGTTGGTGTGTTTGTGAGGACCTAGTTGAGACCTCCTGG

6035

KIF5A

KIF5A-202

KIF5A-202



CCTCTCAGAGTGTCTGATAGCCAGCATTAGTTGTGAGAGTTGGAGCTTCAGATCCCCCTGAGACATAAAGGCTGAGAAACAGG  
GGAGAGTCTCACAGGACCTATCGGTCGTAATCAACACTCTCAACCTCGAAGTCTAGGGGGACTCTGTATTTCCGACTCTTTGTCC

6120

KIF5A

KIF5A-202

KIF5A-202

AGGAGGGTGATGATGGGGGCAAACTTTTAGGCCCAATTTCTTGTCTCTGGGAGGTTTTTCCAGTAAGACTGAACCAACTCCTTT  
TCCTCCCCTACTACCCCGTTTTGAAAATCCGGGTTAAAGGAACGAGACCCCTCCAAAAAGGTCATTCTGACTTGTTGAGGAAA

6205

KIF5A

KIF5A-202

KIF5A-202

AGGCTCTCTGGGCCATCCTAGTATAGTGGGATGGGGCAGGGGGTGATGTTGGTAAGAGGGGTGTGGTGTTCGATCTGTTGTTAGCC  
TCCGAGAGACCCGGTAGGATCATATCACCCCTACCCCGTCCCCCACTACAACCATTCTCCCCACACCACAGCTAGACAACAATCGG

6290

KIF5A

KIF5A-202

KIF5A-202

CAGCTAAACAGGAGAGACACACAGTGGGAGGTGGGCAAGGAGGAAAGATGAATAGAAGCCCCAGGCCCCCTGCCAATTCAGATTC  
GTCGATTTGTCTCTCTGTGTGTACCCCTCCACCCGTTCTCTCTTCTACTTATCTTCGGGGTCCGGGGGACGGTTAAGTCTAAG

6375

KIF5A

KIF5A-202

KIF5A-202

CATCTCAGCTCCACAGCTGGATCTTCTTGTCTGTTTTGCCTGATATCTGTAGGGCTGTACCTTTGTCTTGCTCGTATCTTCCCT  
GTAGAGTCGAGGTGTTCGACCTAGAAGGAACAGACAAAACGGACTATAGACATCCCGACATGGAAACAGAACGAGCATAGAAGGGA

6460

KIF5A

KIF5A-202

KIF5A-202

CACCCTAGCCCTCCCTGTCAATCTCTCACTTGAAGATAAATGCTTACGGGGGGGCCATTTTGTCTTAGGCAACATCCTTGGAGTT  
GTGGGATCGGGAGGGACAGTTAGAGAGTGAACCTTCTATTTACGAATGCCCCCCGGTAAAAACAGAATCCGTTGTAGGAACCTCAA

6545

KIF5A

KIF5A-202

KIF5A-202

TGCTTTTTTCAGACTTAATATTCATTCATCATTTAGGGAATGAGGGCTACAGGAGACATGATTTTTAGGAGACCCCTTGGGGTCCC  
ACGAAAAAGTCTGAATTATAAGTAAGTAGTAAATCCCTTACTCCCGATGTCTCTGTACTAAAAATCCTCTGGGAACCTCCAGGG

6630

KIF5A

KIF5A-202

KIF5A-202

AACAAGGGGAAGGAAATTCCTACTCCTTTTTCTCTTTTTCCCTCTAGCTCTTTTTGGAGCCCACCAGGTCGGGAGCTGGCTTAGGA  
TTGTTCCCTTCCTTTAAGGATGAGGAAAAAGAGAAAAAGGGGAGATCGAGAAAAACCTCGGGTGGTCCAGCCCTCGACCGAATCCT

6715

KIF5A

KIF5A-202

KIF5A-202

ATTAATGGGGGAGGCTGCTTCAGGATGTCTAGGAAGGTGCGGGAAGAGTGAAGGTGGGAGAGATAATCTTTCCCAATGCAGCCCC  
TAATTACCCCTCCGACGAAGTCTACAGATCCTTCCACGCCCTTCTCACTTCCACCCTCTCTATTAGAAAAGGGTTACGTCGGGG

6800

KIF5A

KIF5A-202

KIF5A-202

TACTCCTTCCTGTGACTGCTCTCCCTTCGCCTCTGCAGCACTGCGGCCAGCGCTGAGCTTCAGAGTCCCTTCTGTTCTGTTGGGCT  
ATGAGGAAGGACACTGACGAGAGGGGAAGCGGAGACGTCGTGACGCCGGTTCGCGACTCGAAGTCTCAGGGAAGACAAGCACCCGA

6885

KIF5A

KIF5A-202

KIF5A-202

TTGTTCTGCTTGTTAGAGGGTAGGAGAATAAGCTGGAGAGACAGCTCTGTGTGCCTTTTTCTCCCTACTCCTCTGACTTCTTC  
AACAAAGACGAACAATCTCCCATCCTCTTATTCGACCTCTCTGTGAGACACACGGAAAAAGAGGGGATGAGGAGACTGAAGAAG

6970

KIF5A

KIF5A-202

KIF5A-202

CAGGAACCTGGGGGATGGGGCTTAGCCAAAGTTAATGGCCTGAGTCATAGCAGAAGGGTGCTCTGGGTACCCTCTGTGTGTGGTG  
GTCCTTGGACCCCTACCCCGAATCGGTTTTCAATTACCGGACTCAGTATCGTCTTCCCACAGACCCAGTGGCAGACACACACCAC

7055

KIF5A

KIF5A-202

KIF5A-202

CCCATCTTGTTTTGCTTTTGCACACTCAGAATCCAGTGTGACTTTTTCGCCAGACCCATTTAAGTGTCTGTCTTCTCTGCCTTG  
GGGTAGAACAACAAACGAAAACGTGTGAGTCTTAGGTCACACTGAAAAAGCGGTCTGGGTAAATTCACAGACAGAAGGAGACGGAAC

7140

KIF5A

KIF5A-202

KIF5A-202

GTCTTTCTCAGCAGTGTCCCAGTGCCTGCTGTCTGGACTGCTGCATCTGTACCAGATGTGGGAGGGATGACAGTGAAGAAACACA  
CAGAAAGAGTCGTACAGGGTCACGGACGACAGACCTGACGACGTAGACATGGTCTACACCCTCCCTACTGTCACTTCTTTGTGT

7225

KIF5A

KIF5A-202

KIF5A-202

TACATACACACACACTCTTTCTCTTTCCCCTTCATTCAAGTGTACACAGCTACCTCCCTCAGGTCTCCCAATGGTTAAGTGGG  
ATGTATGTGTGTGTGTGAGAAAGAGAAAGGGGAAGTAAGTTCACATGTGTGTCGATGGAGGGAGTCCAGAGGGTTACCAATTCACCC

7310

KIF5A

KIF5A-202

KIF5A-202

TTCTTAATGCAAGAACTAGGACCATTGTGTACCTCACTTGGCAAAGCTAGGTTGGGACCTGCAGGGTTATTGGAGCAGAATCAG  
AAGAATTACGTTCTTTGATCCTGGTAACACATGGAGTGAACCGTTTCGATCCAACCCTGGACGTCCCAATAACCTCGTCTTAGTC

7395

KIF5A

KIF5A-202

KIF5A-202

TATTGTTTGGGGTGGCCTGGGATTTGATATCTGAAGTGGGGAGCAGGGCTGTCTTTGCTTTGGGGGAGTCTCATAAAGAAAAAT  
ATAACAAACCCACCGGACCCTAAACTATAGACTTCACCCCTCGTCCCGACAGGAAACGAAACCCCTCAGAGTATTTCTTTTTA

7480

KIF5A

KIF5A-202

KIF5A-202

GGAGACGAGAAGTAACGTTTCATTGTGGCCAGTGTCTCTCCAGCATTACCATGGCAACAATCCCCACGGGTGTCACTATGGAAATC  
CCTCTGCTCTTCATTGCAAGTAACACCGGTCACAGAGAGGTGTAATGGTACCGTTGTTAGGGGTGCCACAGTGATACCTTTAG

7565

KIF5A

KIF5A-202

KIF5A-202

AGGCCCTGGCACTTGAAGTTCAGCTTATACCAAGTGCTTTACTGAGGGTTGAACAGGTTGGTTCATCTTTGGACCCCTGATCTTAAA  
TCCGGACCGTGAACCTTCAAGTCGAATATGGTTCACGAAATGACTCCCAACTTGTCCAACCAGTAGAAACCTGGGGACTAGAATTT

7650

KIF5A

KIF5A-202

KIF5A-202

CCCCCAGCCCAATTAGCTTCAGTCAGCACACATGATAGAAAAGTACAGAAAGGTGCTGGGATACACAAATGGAAGAGGAGACAC  
GGGGGTGCGGGTTAATCGAAGTCAGTCGTGTGTAATCTTTTCATGTCTTTCCACGACCCTATGTGTTACCTTCTCCTCTGTG

7735

KIF5A

KIF5A-202

KIF5A-202

CAGGGAGGCTCGGAGTGTGATTAAATTTAAAAGAGAACAAGAACCCTGGACTGTGGGACTCTGAAGAGAGGGCCCTTCAGAGAAGG  
GTCCCTCCGAGCCTCACACTAATTTAATTTTCTCTTGTCTTGGGACCTGACACCCTGAGACTTCTCTCCGGGAAGTCTCTTCC

7820

KIF5A

KIF5A-202

KIF5A-202

CTATAAGGAGCACTTAGACTGCTGGGGGTGGGAGAGAGATTGGATTTTCGGCGACATTTCTAAGAGGAGGAGGGGACTCTGTGACTA  
GATATTCCTCGTGAATCTGACGACCCCCACCCTCTCTCTAACCCTAAAGCCGCTGTAAAGATTCTCCTCCTCCCTGAGACACTGAT

7905

KIF5A

KIF5A-202

KIF5A-202

TTTCTCATTAAACAACCTCACAGAGTCTTCGATTACCTGGAGGTAGAGAGGGTGGGTGGCAGAATTACATACTTCTGAAAATGGGAT  
AAAGAGTAATTGTTGAGTGTCTCAGAAAGCTAATGGACCTCCATCTCTCCACCCACCGTCTTAATGTATGAAGACTTTTACCCTA

7990

KIF5A

KIF5A-202

KIF5A-202

TGAGGTTGGAAAAAGGGAGTGATGAAAGGCTTTAGTTCTGTCTGGAAATACTTGGAAAAATGCCCAAATGTGAGGAGGGGGGATA  
ACTCCAACCTTTTTCCCTCACTACTTTCCGAAATCAAGACAGACCTTTATGAACCTTTTTACGGGTTTACACTCCTCCCCCTAT

8075

KIF5A

KIF5A-202

KIF5A-202

TGGAGTAGGGGAAGAAAAAGCCTTGATAAGGCTCTGACACAGTGTGGCATTTCAGTTCTTGGATCACTTTGCAGTGTGGGTCTG  
ACCTCATCCCTTCTTTTTTCGGAACCTATTCCGAGACTGTGTCAACAACCGTAAAGTCAAGAACCTAGTGAAACGTCACACCCAGAC

8160

KIF5A

KIF5A-202

KIF5A-202

GAATCAGATTGCTTGAATTTGAAACTGTGCTCTACCATTTCTCAGCCATGTGACTGTGGGGAAGCTACCTGACCTCTTTGAGCCT  
CTTAGTCTAACGAACTTAAACTTTGACACGAGATGGTAAAGAGTCGGTACACTGACACCCCTTCGATGGACTGGAGAAACTCGGA

8245

KIF5A

KIF5A-202

KIF5A-202

GTTTCGTCATCTATAAAGTGGTAATAATAATAGTATCTATGTCCTAGGATTACTGTGAACATTAAATGAGATAATGCATATAAAC  
CAAAGCAGTAGATATTTACCATTATTATTATCATAGATACAGGATCCTAATGACACTTGTAAATTTACTCTATTACGTATATTTG

8330

KIF5A

KIF5A-202

KIF5A-202

TGCTTTGTAACATGGCAGGCACACAGTAAACCCTCAATAAGAGTTAGATATTATCACTATTTTATATGCTATCTCCCCACAAGCT  
ACGAAACATTGTACCGTCCGTGTGTCATTTGGGAGTTATTCTCAATCTATAATAGTGATAAAATATACGATAGAGGGGTGTTTCGA

8415

KIF5A

KIF5A-202

KIF5A-202

AGCTTTGACAAAATTGGGAAGTGGGTAACTTTTCTTTTTACTAATTGTTTTTCATGCAAACCTCCAGATCCCAAGTATCTTCTT  
TCGAAACTGTTTTAACCCCTTCACCCATTGTGAAAAGGAAAAATGATTAACAAAGTACGTTTGGAGGTCTAGGGTTCATAGAAGAA

8500

KIF5A

KIF5A-202

KIF5A-202

GCTCCCTTCCTTGTCAATATCTATGTTTAGTCAACAAATATTTATGAAGAGCATCTGTCATAGTCCTCTATATGTTGCTATAAAG  
CGAGGGGAAGGAACAGTTATAGATACAAATCAGTTGTTTATAAATACTTCTCGTAGACAGTATCAGGAGATATACAACGATATTTTC

8585

KIF5A

KIF5A-202

KIF5A-202

GAATACCCCAAGGCTGGGTAAATTTATAAAGAAAAGAGATATATTTGGCTAACAGTTCTGCAGGCTGTACAAGAAGCATGGCACCCAG  
CTTATGGGGTCCGACCCATTAAATATTTCTTTTCTCTATATAAACCGATTGTCAAGACGTCCGACATGTTCTTCGTACCGTGGTC

8670

KIF5A

KIF5A-202

KIF5A-202

CATCTGCTCTGATGAGGGCCTCAGGAAGCTTCCAGTCATGGTGGGAGGCCAAAGAGGGAGCAGGAATCACATGGCGAGAGAGGGAA  
GTAGACGAGACTACTCCCGGAGTCCCTTCGAAGGTCAGTACCACCTCCGTTTCTCCCTCGTCTTAGTGTACCGCTCTCTCCCTT

8755

KIF5A

KIF5A-202

KIF5A-202

AAAGAGGGAGAGCAAGAGGTTGCCAAGCTCTTTTTAACAGCCAGCTCTCACATGAACTCATAAAGCGATAACTCACTCATTACCAT  
TTTTCTCCCTCTCGTTCTCCACGGTTCGAGAAAAATTGTCGGTTCGAGAGTGTACTTGAGTATTTGCTATTGAGTGAGTAATGGTA

8840

KIF5A

KIF5A-202

KIF5A-202

GGGAAGGCACCAAGCCACTCATCAGGGATTTACCTCCTTGAGCCAAGCACTTCCCACCATGCCCCACCTCCAACAATGGGGATC  
CCCCTTCGTTGGTTCGGTGAAGTAGTCCCTAAATGGAGGAACTCGGTTCTGTAAGGGTGGTACGGGGTGGAGGTTGTTACCCCTAG

8925

KIF5A

KIF5A-202

KIF5A-202

AAATGTCAACATGAGATTTGGAGGGGACAAACATCCAAACTACATCAGCATCCTATAGGCCAGGGACTGTGTTTGGTGTGGGGA  
TTTACAGTTGTACTCTAAACCTCCCCTGTTTGTAGGTTTGTAGTGTAGTTCGTAGGATATCCGGTCCCTGACACAAACCACAACCCCT

9010

KIF5A

KIF5A-202

KIF5A-202

TTTAAAGGGAATCCCTGCCTTCAAGAAAATCTGGATCAAGGTTGTGATCCATAGCCCATGGAGTGGCCTGCGCAGAGGCAGGGGA  
AAATTTCCCTTAGGGACGGAAGTTCCTTTTAGACCTAGTTCCAACACTAGGTATCGGGTACCTCACCGGACGCGTCTCCGTCCCCT

9095

KIF5A

KIF5A-202

KIF5A-202

GAGGAACATCAGATATGGCTTTTTGCTAACTATCTATATACTCCCCAGATTCTGATAAGGAACCTCCACACAACATACTACAGTCT  
CTCCTTGTAGTCTATAACGAAAACGATTGATAGATATATGAGGGGGTCTAAGACTATTCCTTGGAGGGTGTGATGATGTCAGA

9180

KIF5A

KIF5A-202

KIF5A-202

GATTCAGAGTATTGTGTGTTATGAGAGCTGTAAATAATGGTGGTGCTTCCCATGTCTATGGGCAGGAAAAGTGGAAAGACCACTGG  
CTAAGTCTCATAACACACAATACTCTCGACATTTATTACCACCACGAAGGGTACAGATACCCGTCCTTTTACCTTCTGGTGACC

9265

KIF5A

KIF5A-202

KIF5A-202

TCTAGTTATTTTCATGAAAAGATCACTTTTCTCTAGGCACATTGCCCATGGGTTAGCCCTGCTGTACAAGGAGCAGTAATGAAAA  
AGATCAATAAAAAGTACTTTTCTAGTGAAAAGAGATCCGTGTAACGGGTACCCAATCGGGACGACATGTTCTTCGTCATTACTTTT

9350

KIF5A

KIF5A-202

KIF5A-202

AAAAATCAGGCAAAAATTAATTCATCCTGAGTATAATCAATAGAAAATTAAGAAGAAATGTACAAAACCTTAGCCGAGCATGGTGGTG  
TTTTTAGTCCGTTTTTAATTAAGTAGGACTCATATTAGTTATCTTTTAATTTTCTTTACATGTTTTGAATCGGCTCGTACCACCAC

9435

KIF5A

KIF5A-202

KIF5A-202

GCTGCCTGTAGTCCCAGCTACTCAGGAGGCTGATGCAGGAGAATTGCTTGAACCTGGGAGGCGGAGGTTGCAGTGAGCCGAGATC  
CGACGGACATCAGGGTCGATGAGTCCTCCGACTACGTCTTAAACGAACTTGGACCCTCCGCCTCCAACGTCACCTCGGCTCTAG

9520

KIF5A

KIF5A-202

KIF5A-202

TTGCCACTGCACTCCAGCCTGGGCAACAGAGCAAGACTCCGTCTCAAAAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAA  
AACGGTGACGTGAGGTCGGACCCGTTGTCTCGTTCTGAGGCAGAGTTTTATTATTTATTTATTTTAAATTTTTTTGTTTAAACC

9605

KIF5A

KIF5A-202

KIF5A-202

CTGGGCACGGTGGCTCACGCCTATAATCTCAGCACTTTGGGAGACAGAGGCGGGTGGATAACAAGGTCAGGAGTTCGACACCAGC  
GACCCGTGCCACCGAGTGCGGATATTAGAGTCGTGAAACCTCTGTCTCCGCCACCTATTGTTCCAGTCTCAAGCTGTGGTCG

9690

KIF5A

KIF5A-202

KIF5A-202

ATGGCCAACATGGTGAAACCTGTCTGTACTGAAAATATAAAAATTAGCCGGGCGTGGTGGTGGGCGCCTGTAATCCCAGCTACT  
TACCGGTTGTACCACTTTGGGACAGACATGACTTTTATATTTAATCGGCCCGCACCACCACCCGCGGACATTAGGGTCGATGA

9775

KIF5A

KIF5A-202

KIF5A-202

CGGAAGGCTGAGGCAGGAGAATCGCTTGAACCTGGGAGGCGAAGGTTGCAGTGAGCCAAGATCATGCTGCTGCACTCCAGCCTGG  
GCCTTCCGACTCCGTCTTCTTAGCGAACTTGGACCCTCCGCTTCCAACGTCACCTCGGTTCTAGTACGACGACGTGAGGTCGGACC

9860

KIF5A

KIF5A-202

KIF5A-202

GCGAAAGAGTGAAACTCTATCTCAAAAAAAAAAAAAAAAAAGAAAAAGAAAGAAAGAAAAAAAAAGAAAAAAAACAAAATTTACATTTTAA  
CGCTTCTCACTTTGAGATAGAGTTTTTTTTTTTTTTTTCTTTTTCTTTCTTTCTTTTTTTTTCTTTTTTGTAAATGTAAATTT

9945

KIF5A

KIF5A-202

KIF5A-202

AAGGAATAAAACAACCTTAAAGACATAAAGAGCCAGGCTTGGAAATTTAGAGCCCAGCCAAGAATACAGAAGTAGGTAGCAGGCCTT  
TTCTTATTTTGTGAAATTTCTGTATTTCTCGGTCCGAACCTTAAAATCTCGGGTTCGGTTCTTATGTCTTCATCCATCGTCCGGAA

10,030

KIF5A

KIF5A-202

KIF5A-202

CCCAGAACTCCTGAAATCATATCTCATGTCACATGGCTTTCCCTGCTCAGGAGATTACTAAATGCACCAATTTTTAGCTCTTGGG  
GGGTCTTGAGGACTTTAGTATAGAGTACAGTGTACCGAAAGGGACGAGTCTCTAATGATTTACGTGGTTAAAAATCGAGAACCC

10,115

KIF5A

KIF5A-202

KIF5A-202

TATCTTTTTTTTTTTTTCAGACGGAGTCTCGCTCTGTACCCAGGCTGGAGTGCAGTGGCGCGATCTCGGCTCACTGGAAACTCCG  
ATAGAAAAAAAAAAAAAGTCTGCCTCAGAGCGAGACAGTGGGTCGACCTCACGTACCCGCGCTAGAGCCGAGTGACCTTTGAGGC

10,200

KIF5A

KIF5A-202

KIF5A-202

CCTTCCGGGTTACAGCCATTCTTCTGCCTCAGCCTCCCAAGCAGCTGGGACTACAGGCGCCTGCCACCACGCCCGGCTAATTTTT  
GGAAGGCCCAAGTGCGGTAAGAAGACGGAGTCGGAGGGTTTCGTCGACCTGATGTCCGCGGACGGTGGTGCGGGCCGATTAAAAA

10,285

KIF5A

KIF5A-202

KIF5A-202

TGTATTTTTAGTGGAGACGGGGTTTTACCGTGTTAGCCAGGATGGTCTCGATCTCCTGACCTCGTGATCCACCCGCCTCGGCCTC  
ACATAAAAAATCACCTCTGCCCAAAGTGGCACAATCGGTCTACCAGAGCTAGAGGACTGGAGCACTAGGTGGGCGGAGCCGGAG

10,370

KIF5A

KIF5A-202

KIF5A-202

CCAAAGTGCTGGGATTACAGATGTGAGCCACCGCGCCAGCCCACTCTTGGGTATCTTTAGACTCAGATCTGAGAATCTCTTCC  
GGTTTACAGACCTAATGTCTACACTCGGTGGCGCGGGTCGGGTGAGAACCATAGAAAATCTGAGTCTAGACTCTTAGAGAAGG

10,455

KIF5A

KIF5A-202

KIF5A-202

TTCTTCCCTCTCTGCTCTTTTCTTTCTTCCCAGCCTAGACTGATGTAAAGGGGTTCTGATGAAAAGGGGCTATAATTGGCTTCA  
AAGAAGGGAGAGACGAGAAAAGAAAGAAGGGTCGGATCTGACTACATTTCCCAAGGACTACTTTTCCCGATATTAACCGAAGT

10,540

KIF5A

KIF5A-202

KIF5A-202

GCATTTGGAGAGCGCTCTCCATTTAATGCGTCTGTGGAGCCTTCTAGATCCTGTAACCTGGGAATGTTTTGAGGGAGTGTGTGTG  
CGTAAACCTCTCGCGAGAGGTAATAATTACGCAGACACCTCGGAAGATCTAGGACATTGACCCTTACAAAACCTCCCTCACACACAC

10,625

KIF5A

KIF5A-202

KIF5A-202

GGGGCTGGGGTGGGGTGGTTGGTGTGTTGGTGCCCATGTGTTTGTGGGGGAGGGGAGGGGCAAGATTGGCTTGAGAGTTACATT  
CCCCGACCCACCCACCAACCACACAACCACGGGTACACAAAACCCCCCTCCCCTCCCCTTCTAACCGAACCTCTCAATGTAA

10,710

KIF5A

KIF5A-202

KIF5A-202

TAATCCCCTTTGGCTGGGTGCCTGGCTTCATGAAGCATGGATAGAGATTGTTGGTGGGAAAGAGATGAGAAAGCCAGTCTCATCT  
ATTAGGGGAAACCGACCCACGGACCGAAGTACTTCGTACCTATCTCTAACAACCACCCTTTCTCTACTCTTTTCGGTCAGAGTAGA

10,795

KIF5A

KIF5A-202

KIF5A-202



TTTCACATTTTTCTGCCTGTTTTATATTCTGGCTGCACTGGCAGTTGATTAAATGATGCCACCCAGATTAAGGGTGGATCTGCC  
AAAGTGTA AAAAAGACGGACAAAATATAAGACCGACGTGACCGTCAACTAATTTACTACGGGTGGGTCTAATTCACCTAGACGG

10,880

KIF5A

KIF5A-202

KIF5A-202

TTTCCCAGTCCACTGACTCATATGTTAATATCCTTTGGCAACACCCTCACAGACACACCCAGGATCAATACTTTGCATCATTTCAG  
AAAGGGTCAGGTGACTGAGTATACAATTATAGGAAACCGTTGTGGGAGTGTCTGTGTGGGTCTTAGTTATGAAACGTTAGTAAGTC

10,965

KIF5A

KIF5A-202

KIF5A-202

TCCAGTCAAGTTGACACTCAGTATTAACCATCACAAATTCACCCCTCATCAACTTGAACCCATACACATCTCCTGAGATCGTACA  
AGGTCAGTTCAACTGTGAGTCATAATTGGTAGTGTAAAGGTGGGGAGTAGTTGAACCTGGGTATGTGTAGAGGACTCTAGCATGT

11,050

KIF5A

KIF5A-202

KIF5A-202

AATCTTCAAATAAGGACAATAATAAGGTCATAATTATGCGCCTAATATAATAACAATATCCTTCGTACAACCGGAAATGCACCAA  
TTAGAAGTTTATTCTGTTATTATTCCAGTATTAATACGCGGATTATATTATGTTGATAGGAAGCATGTTGGCCTTTACGTGGTT

11,135

KIF5A

KIF5A-202

KIF5A-202

TCCCCAACCCAAATGCTATTATATAAAGTTAACATACTTAAATGCTGATACGAAGTCAATAAGTCTTATGTCACATAATAAAGGA  
AGGGGTTGGGTTTACGATAATATATTTCAATTGTATGAATTTACGACTATGCTTCAGTTATTCAGAATACAGTGTATTATTTCTT

11,220

KIF5A

KIF5A-202

KIF5A-202

AAAAGGAAATTA AAAAAAAAAAAGATGAGAGGCATTGGCTTGAGATAGACATATTTTGCTTGTCTTCTGTTTCTTGCCACTGGGTG  
TTTTCTTTAATTTTTTTTTTTTCTACTCTCCGTAACCGAACTCTATCTGTATAAAACGAACAAAGACAAAGAACCAGGTGACCCAC

11,305

KIF5A

KIF5A-202

KIF5A-202

GGAGAAACATTGAGGTAGATTACAATTTAAAATTAATTACAATTCAAAATTAAGGTAGATTTTTCTTTAATAATATTAAAAATAA  
CCTCTTTGTAACCTCATCTAATGTTAAATTTAATTAATGTTAAGTTTTAATTCATCTAAAAAGAAATTTATTATAATTTTTATT

11,390

KIF5A

KIF5A-202

KIF5A-202

TGTAATTACAACACTAATACATTTTAATTGTTAACAAAGTTCAAGACAAAGGAAAGGACACCGAAGAAGCTAAAAATCACCCAAT  
ACATTAATGTTGTGATTATGTAAAATTAACAATTGTTTCAAGTTCTGTTTCCTTTCCTGTGGCTTCTTCGATTTTTAGTGGGTTA

11,475

KIF5A

KIF5A-202

KIF5A-202

ATCTTACCACCCCAAAGAAGCACTGTTATTAATAATAATTTGATGTATTTTTCCAGTGTTTTTTCTACATATATACATATGTTAA  
TAGAATGGTGGGGTTTCTTCGTGACAATAATTATTATTAAACTACATAAAAAAGGTCACAAAAAAGATGTATATATGTATAACAATT

11,560

KIF5A

KIF5A-202

KIF5A-202

TTTTAATAAGATTATATATCATAAACTATATATTGTTTTGTAACCTTTTTTCTCAAACAAAATATTATTACTATTTTTGCCATTGT  
AAAATTATTCTAATATATAGTATTTGATATATAACAAAACATTGGAAAAAAGAGTTTGTTTTATAATAATGATAAAACGGTAACA

11,645

KIF5A

KIF5A-202

KIF5A-202

TAAATATTTTTACATAACTTTATTATTTTTACAATTTTTCTGTTTTTTTTTTGAGATGGAGTCAGGCTGGAGTGTGCAGTGGTGTG  
ATTTATAAAAATGTATTGAAATAATAAAATGTTAAAAAGACAAAAAAAACCTCTACCTCAGTCCGACCTCACACGTCACCCACAC

11,730

KIF5A

KIF5A-202

KIF5A-202

ATCTTGGCTCACTGCAACCTCTGCCTCCCGGGTTCAAGCAATCCTCCACCTCAGCTTCTCGAGTAGCTAGGATTATAGGCATGT  
TAGAACCGAGTGACGTTGGAGACGGAGGGCCCAAGTTCGTTAGGAGGGTGGAGTCGAAGGACTCATCGATCCTAATATCCGTACA

11,815

KIF5A

KIF5A-202

KIF5A-202

ACCACCATGCCTGGCTATATTTTTACAATTTTTCAATTTAACTTTTGAATGTCTTACCTGCACATGTGACAAAATGCAAAGGATATG  
TGGTGGTACGGACCGATATAAAAATGTTAAAAAGTTAAATTTGAAAAGCTTACAGAATGGACGTGTACACTGTTTTACGTTTCCTATAC

11,900

KIF5A

KIF5A-202

KIF5A-202

AAAAGGTTTATATTGTTTCCTTCTCCTTCTCACCCCTCTTTTCCAGCCACACAGTTCCCTTTTTCAGAAGGCAACTTCTTGTGGAT  
TTTTCCAAATATAACAAAGGAAGAGGAAGAGTGGGGAGAAAAGGTCGGTGTGTCAAGGGAAAAGTCTTCCGTTGAAGAACACCTA

11,985

KIF5A

KIF5A-202

KIF5A-202

CTTTCCAAAAACCTACTATACATTTATAAGCAAATACATATATACATGCATACCTTTTTTTTACACAAATGGTAGCGTATTATACA  
GAAAGGTTTTTGGATGATATGTAATATTCGTTTATGTATATATGTACGTATGGAAAAAATGTGTTTACCATCGCATAATATGT

12,070

KIF5A

KIF5A-202

KIF5A-202

TCCATTCTGCACCTTTAAAAACAAAAACAGCCTGGGTGTGGTGGCTCATGCCTGTAATCTAAGCACTTTGAGGCCGAGGCGGGAG  
AGGTAAGACGTGGAAATTTTTGTTTTTGTTCGGACCCACACCACCGAGTACGGACATTAGATTTCGTGAAACTCCGGCTCCGCCCTC

12,155

KIF5A

KIF5A-202

KIF5A-202

GATCACTTGAGGTCAGGAGTTCGAGACCAGCCTGACCAACATGGTGAACCCCATCTCTACTAAAAATATAAAAAATTCTGGCTGG  
CTAGTGAACCTCCAGTCCCTCAAGCTCTGGTCGGACTGGTTGTACCACCTTTGGGGTAGAGATGATTTTTATATTTTTAAGACCGACC

12,240

KIF5A

KIF5A-202

KIF5A-202

GTGCAGTGGCTCACACCTGTAATCCCAGCACTTTGGGAGGCTGAGGTGGGCGGATCATGAGGTCAGGAGATGGAGACCATCCTGG  
CACGTCACCGAGTGTGGACATTAGGGTCGTGAAACCTCCGACTCCACCCGCTAGTACTCCAGTCCCTCTACCTCTGGTAGGACC

12,325

KIF5A

KIF5A-202

KIF5A-202

CCAACATGGTGAACCTCGTCTCTACTAAAAATACAAAAATTAGGCCAGGTGCGGTGGCTTACGCCTGTAATCTCAGCATTGGGA  
GGTTGTACCACCTTTGGAGCAGAGATGATTTTTATGTTTTAATCCGGTCCACGCCACCGAATGCGGACATTAGAGTCGTAACCTC

12,410

KIF5A

KIF5A-202

KIF5A-202

GGCCAAGGCGGGTGGATCACCTGAGGTCAGGAGTTCAAGACCAGCCTGGCCAACATGGCCAACCCCATCTCTACTAAAAATACA  
CCGGTTCCGCCACCTAGTGGACTCCAGTCCCTCAAGTTCTGGTCGGACCGGTTGTACCGGTTTGGGGTAGAGATGATTTTTATGT

12,495

KIF5A

KIF5A-202

KIF5A-202

GAAATTAGCCGGGTGTGGTGGCGGGCGCCTATAATCCCAGCTACTCTGGAGGCTGAAGCAGGAGAACTGCTTGAGCCCGGGAGGC  
CTTTAATCGGCCACACCACCGCCCGCGGATATTAGGGTCGATGAGACCTCCGACTTCGTCTCTTTGACGAACTCGGGCCCTCCG

12,580

KIF5A

KIF5A-202

KIF5A-202

AGAGGTTGCGGTGAGCTGAGATGGAGCCACTGCACTCCAGCTTGGGCGACAGAGCAAGACTCTTGTCTCAAAAAACAAAAAGCAA  
TCTCCAACGCCACTCGACTCTACCTCGGTGACGTGAGGTGGAACCCGCTGTCTCGTTCTGAGAACAGAGTTTTTTTGTTCGTT

12,665

KIF5A

KIF5A-202

KIF5A-202

AACAAACAAACAAAAACCCAAAACAAAACAGAGTCTTGGACACCCCTTCTTATCAGCACATAAAGATTTATCTCATTCTTTTTT  
TTGTTTGTGTTGTTTTTGGGTTTTGTTTTGTCTCAGAACCTGTGGGAAGGAATAGTCGTGTATTTCTAAATAGAGTAAGAAAAAA

12,750

KIF5A

KIF5A-202

KIF5A-202

GGTTTTGTTTTGTTTTTCAAGACAGGGTCTCACTCTGTTGCTCAGGCTGGAGTGCAGTGGTGCATCATGGCTCACTGCAACCTT  
CCAAAACAAAACAAAAAGTTCTGTCCCAGAGTGAGACAACGAGTCCGACCTCACGTCACCACGTTAGTACCGAGTGACGTTGGAA

12,835

KIF5A

KIF5A-202

KIF5A-202

CACCTTCGAGGCTCAGGCCATCATCCTGCCTCAGCCTGCTGAGTAGCTGGGACCACAAGGCCCATGCCACCACACCTGGCTATTT  
GTGGAAGCTCCGAGTCCGGTAGTAGGACGGAGTCGGACGACTCATCGACCTGGTGTTCGGGTACGGTGGTGTGGACCGATAAA

12,920

KIF5A

KIF5A-202

KIF5A-202

TTTTTAATTTTTGTAGAGACAGGGTCTCCCTATGTTGCCAGGCTGGTCTCCAACCTCCTGGCCTCAAGGATCCTCCAGACTTGA  
AAAAAATTA AAAACATCTCTGTCCCAGAGGGATACAACGGGTCCGACCAGAGGTTGAGGACCGGAGTTCTTAGGAGGTCTGAACT

13,005

KIF5A

KIF5A-202

KIF5A-202

CCTCCAAAGGGCTCGGATTACACGGTACATGAGCTATCTCATTCAACTGTATAATTTGTTGTAGGGATAGGCCATTATTTAACC  
GGAGGGTTTTCCCGAGCCTAATGTGCCATGTACTCGATAGAGTAAGTTGACATATTAACAACATCCCTATCCGGTAATAAATTGG

13,090

KIF5A

KIF5A-202

KIF5A-202

AGGCCTCTGTTGGTGGACATTAAGGGTTGTTCTAATCATCTGCTATTACAAACAGTTGAATGACCTTGTATAAATATTTTTTGCA  
TCCGGAGACAACCACCTGTAATTCCAACAAGATTAGTAGACGATAATGTTTGTCAACTTACTGGAACATATTTATAAAAAACGT

13,175

KIF5A

KIF5A-202

KIF5A-202

TATGTGCAGTATGTCTACAGGATAAAATTTTCGAAGTGGAGGTCATAAAGCATATGCATTTAAAAATGTGAGGCTATTTCCAAAT  
ATACACGTCATACAGATGTCCTATTTAAAAAGCTTCACCTCCAGTATTTTCGTATACGTAAATTTTACACTCCGATAAAGGTTTA

13,260

KIF5A

KIF5A-202

KIF5A-202

TGCCTTTCACAGAGTTGGCTCCAATTTCTATGTACCCTCAGCAGTATGTGTGAATATCTATTTACTCACATTCTCACCAGTGTA  
ACGGAAAAGTGTCTCAACCGAGGTTAAAGATACATGGGAGTCGTCATACACACTTATAGATAAATGAGTGTAAGAGTGGTCACATT

13,345

KIF5A

KIF5A-202

KIF5A-202

TGCGTTGTCTATTTTATTTTGGCCACTTTTCATAGGTAAAAATGGTGTTCATAGTTTTAATATGCATTTTGCTTATTAACAGTGA  
ACGCAACAGATAAAAATAAACCGGTGAAAGTATCCATTTTACCACAAAGTATCAAAATTATACGTAAAACGAATAATTGTCACT

13,430

KIF5A

KIF5A-202

KIF5A-202

GGTCGAGCATTAAATTAATATTAATTAATATATTTTAAACATTTAGGAGCCACTATAACATCATTTTATGATGTTATAATTTATGAT  
CCAGCTCGTAATTAATTATAATTAATTATATAAAATTGTAATCCTCGGTGATATTGTAGTAAAATACTACAATATTAATACTA

13,515

KIF5A

KIF5A-202

KIF5A-202

AGTGATATAATTTACATACAGTGACAGATCTTAGGCAAACAGCTTGATAAATTTTATGACATATGTAGACACCCATGTAACCAC  
TCACTATATTAATGATGTCACATGTCTAGAATCCGTTTGTGGAACATTTTAAAATACTGTATACATCTGTGGGTACATTGGTG

13,600

KIF5A

KIF5A-202

KIF5A-202

TACACAGATCAAGATCTAGAACATTTCTGTCACTCCTGAAAGCTCCTTCATATCCTCTTCTGTAATACCACTTGTATGTTGTT  
ATGTGTCTAGTTCTAGATCTTGTAAAGACAGTGAGGACTTTCGAGGAAGTATAGGAGAAGGACATTTATGGTGAACATACAACAA

13,685

KIF5A

KIF5A-202

KIF5A-202

ACCACAATAGCAGGTAGCTGCTGTTTTGACTTCTAGCACTACAGATAAGTTCTGTCCATTCTTGAACCTTCATATGAAGGGAGTAA  
TGGTGTATCGTCCATCGACGACAAAACCTGAAGATCGTGATGTCTATTCAAGACAGGTAAGAACTTGAAGTATACTTCCCTCATT

13,770

KIF5A

KIF5A-202

KIF5A-202

TACAGTATGTGCTCTTTTGTGTTTGGATTCTTTCAACGTGTTTTTGGAGATATATTGACGTTCTATTTATTAATGTTCTATTATGA  
ATGTCATACACGAGAAAAACACAAACCTAAGAAAAGTTGCACAAAAACTCTATATAACTGCAAGATAAAATAATTACAAGATAACT

13,855

KIF5A

KIF5A-202

KIF5A-202

TATTTTAATTTTATTTATTTATTTTTTTTTGGGACAGAGTTGCACTTTTGTGCTCAGGCTGGAGTGCGGTGGCGCGATCTCGGCTC  
ATAAAATTAATAAAATAAAATAAAAAAACCCCTGTCTCAACGTGAAACGACGAGTCCGACCTCACGCCACCGCGCTAGAGCCGAG

13,940

KIF5A

KIF5A-202

KIF5A-202

ACTGCAACCTCTGCCTCCTGGGTTCAAGCGATTCTTGTGCCTCAGCCTCCCAAGTAGCTGAGATTACAGGCATGCACCGCTATGC  
TGACGTTGGAGACGGAGGACCCAAGTTCGCTAAGAACACGGAGTCGGAGGGTTCATCGACTCTAATGTCCGTACGTGGCGATACG

14,025

KIF5A

KIF5A-202

KIF5A-202

CCAGCTAATTTTTGTATTTTTAGTAGAGACATGGTTTTACCATGTTGGCCAGGCTAGTCTCGAACTCCTGACCTCAAGTAATCTG  
GGTCGATTAAAAACATAAAAAATCATCTCTGTACCAAAGTGGTACAACCGGTCCGATCAGAGCTTGAGGACTGGAGTTCATTAGAC

14,110

KIF5A

KIF5A-202

KIF5A-202

CCTGCCTTGGCCTCCCAAAGTGCTGAGATTACAGGCGTGAGCCACCATGCCTAGCCAGTTATGGCATTATTTTAAATAACAGTGA  
GGACGGAACCGGAGGGTTTTACGACTCTAATGTCCGCACTCGGTGGTACGGATCGGTCAATACCGTAATAAAATTTATTGTCACT

14,195

KIF5A

KIF5A-202

KIF5A-202

GGAATAAAATATATGTATATGCTATAATTTAATTCACCTCCTTAGGTTAACAGTCTCCTAAATGTTACTCCTTTAAGTCGTCTTC  
CCTTATTTTATATACATATACGATATTAAATTAAGTGAGGAATCCAATTGGTCAGAGGATTTACAATGAGGAAATTCAGCAGAAG

14,280

KIF5A

KIF5A-202

KIF5A-202

AATTTCTCATTATTATAAGCAATGTGATGATAAACACCCTTGTAGCGAAATCTTGATTTCCATGATATCAATTCTTAGAAGTAGA  
TTAAAGAGTAATAATATTGTTACACTACTATTTGTGGGAACATCGCTTTAGAACTAAAGGTACTATAGTTAAGAATCTTCATCT

14,365

KIF5A

KIF5A-202

KIF5A-202

ATTTCTAGATCAATGGATATGTAAAAATTTAAGGCTTTTGGATTATGCATTTTTGAATTGTTATATGGATGTACTCTCCAACCAGAA  
TAAAGATCTAGTTACCTATACATTTTAAATTCCGAAAACTAATACGTAAAAACTTAACAATATACCTACATGAGAGGTTGGTCTT

14,450

KIF5A

KIF5A-202

KIF5A-202

AATAATGAAAGTTCTCATTTTTTTGAACCCACATCTACACTGGGTATTACAATGCAAATTTTGTTCAGTTTGGAGAGGTGAAA  
TTATTACTTTCAAGAGTAAAAAACTTGGGTGTAGATGTGACCCATAATGTTACGTTTAAAAACAAAAGGTCAAACCTCTCCACTTT

14,535

KIF5A

KIF5A-202

KIF5A-202

AGAAATTTTACCATTTTCAGTTTCTTTTCTTGGAAAATGTTGAACATCTTCATGATTGCTGAACATTTATATTTCTTCTTCTGTTG  
TCTTTAAAATGGTAAAGTCAAAGAAAAGAACCTTTTACAACCTTGTAGAAGTACTAACGACTTGTAATATAAAGAAGAAGACAAC

14,620

KIF5A

KIF5A-202

KIF5A-202

CTTGTTTCTAGTTCTTGTTACCTTTTTCTGTTTAGTTTTGTCTTTTTGTTACTAATTTATGAGAGTTTTTAAGGCGGGGCATG  
GAACAAAGATCAAGAACAAGTGGAAAAGACAAATCAAAAACAGAAAAACAATGATTAATACTCTCAAAAATTCCGCCCCGTAC

14,705

KIF5A

KIF5A-202

KIF5A-202

GTGGCTCACGCTTGCAATCCTAGCACTTTGGGAGGCTGAGGTGGGTGGATTGCTTGAGCCCAGGAGTTTGGAGACCAGCCAGGCA  
CACCGAGTGCGAACGTTAGGATCGTGAAACCCTCCGACTCCACCCACCTAACGAACTCGGGTCTCAAACTCTGGTCGGGTCCGT

14,790

KIF5A

KIF5A-202

KIF5A-202

ACATGGTGAGACTCTGCCTCTACAAAAATAAACAAAATTAGGCAGATATAGTGGTATGTGCCTGTGGTCCAGCTACTTGGGAG  
TGTACCACTCTGAGACGGAGATGTTTTTTATTTGTTTTAATCCGTCTATATCACCATACACGGACACCAGGGTTCGATGAACCCTC

14,875

KIF5A

KIF5A-202

KIF5A-202

GATTGCTTGGGCCTGGGAGGTTGCAGCTGCAGTGAGCTGTGATTTCCGCACTGTACTCCAGCCTACATGACAGATGAGACCCTGA  
CTAACGAACCCGGACCCTCCAACGTCGACGTCACCTCGACACTAAAGCGGTGACATGAGGTTCGGATGTACTGTCTACTCTGGGACT

14,960

KIF5A

KIF5A-202

KIF5A-202

CTCAAGAAAAAGAAAAAGAAAAAGAAAAATAGAGAGATTTTTTGGATTATTTGTTTGTGTTTATTTGTTTGTGTTTGTGTTGATACAGGGTCTC  
GAGTTCTTTTTCTTTTTCTTTTTCTTTTTATCTCTCTCTAAAAAACTAATAAACAAACAAATAAACAAACAAACAAACTATGTCCCAGAG

15,045

KIF5A

KIF5A-202

KIF5A-202

TCTCTGTCACCCAGGCTGGAGTGCAGTGGCCCGATCTTGGCTCACTGCAACCTCTGCCTTTTGGAGCTCAGGTAATTCTCCCATCT  
AGAGACAGTGGGTCCGACCTCACGTCAACGGGCTAGAACCGAGTGACGTTGGAGACGGAAAACTCGAGTCCATTAAGAGGGGTAGA

15,130

KIF5A

KIF5A-202

KIF5A-202

CAGCCTCCTGAGTAGCTGGAATTACAGGTGTGCACCACCACACCCAGCTAATTTTTGTATTTTTGTAGAGATGGGGTTTCACCA  
GTCGGAGGACTCATCGACCTTAATGTCCACACGTGGTGGTGTGGGTCGATTAACAAACATAAAAAACATCTCTACCCCAAAGTGGT

15,215

KIF5A

KIF5A-202

KIF5A-202

TGTTGCCAGTCTGGTCTTAAACTCCTGACCTCAAGTAATCTGCCTGCCTCAGCCTCCCAAAGTGCTGGGATTACATGCATGAGT  
ACAACGGGTGACAGCAGAATTTGAGGACTGGAGTTCATTAGACGGACGGAGTCGGAGGGTTTCACGACCCTAATGTACGTA

15,300

KIF5A

KIF5A-202

KIF5A-202

CACCGTGCCAGCCAGCAGTGTGTTTTGTAAAAGGAAATCTTAGCACTGGAATCCTGGTGCAGACTATGAACAGTATGGACATTT  
GTGGCACGGGTGCGGTCGTCAACAAAACATTTTTCTTTTGAATCGTGACCTTAGGACCACGTCGTGATACTTGTGCATACCTGTAAA

15,385

KIF5A

KIF5A-202

KIF5A-202

AAATATTTAATAGAATTGTCCTCCAGAAAGGTTCTATCAGTTGGTAATTTACAGAGAGCACTTTTTCTAACTTCTTTTTCTTTGTG  
TTTATAAATTATCTTAACAGGAGGTCTTTCCAAGATAGTCAACCATTAAATGTCTCTCGTGAAAAGATTGAAGAAAAGGAAACAC

15,470

KIF5A

KIF5A-202

KIF5A-202

GATTCTGTTTCTTGGACTTCAGAGGCTTTACCACAGAGAGACTGGATAAATATTTTAGGTAGGATTTTTTCTATAAGCCAAAT  
CTAAGACAAAGAACCTGAAGTCTCCGAAAGTGGTGTCTCTCTGACCTATTTATAAAATCCATCCTAAAAAAGATATTCGGTTTA

15,555

KIF5A

KIF5A-202

KIF5A-202



TTAATTGTTTAAATATTAATAAAAAACATTTATTAGTTTTCTTTTATACAAAGAAATATAAAGAAGAAAAGAATAAACGATTATTTCT  
AATTAACAAAATTATAATTTTTTGTAAATAATCAAAGAAAATATGTTTTCTTTATATTTCTTCTTTTCTTATTTGCTAATAAAGA

15,640

KIF5A

KIF5A-202

KIF5A-202

TTTTTGCCATTAAAACTTTTTAAATATAATGCTCGTACATAGTTTTAAAAATGTAAACCATGCAGGATACAAAATGAAAAATAAA  
AAAAACGGTAATTTTGAAAAATTTTATATTACGAGCATGTATCAAATTTTACATTTGGTACGTCCTATGTTTTACTTTTTATTT

15,725

KIF5A

KIF5A-202

KIF5A-202

AGCCTTTCTCTCAGTTTTCTCTCCTCAAAGTAACCACTGTTAACACTTTTTGTATAATTCCTTCTAGAAAAAAATTTCTGTAGATAT  
TCGGAAGAGAGATCAAAGAGAGGAGTTTCATTGGTGACAATTGTGAAAACATATTAAGGAAGATCTTTTTTTTAAAGACATCTATA

15,810

KIF5A

KIF5A-202

KIF5A-202

TCATGCAATGTTATTGCTATACCTAGAGCCACATCTCCAGCTCTAGCCAAGGTTTACAACCTTTCCTTAATTAGTTAAAACATATC  
AGTACGTTACAATAACGATATGGATCTCGGTGTAGAGGTCGAGATCGGTTCCAAATGTTGAAAGGAATTAATCAATTTTGTATAG

15,895

KIF5A

KIF5A-202

KIF5A-202

TCCAAACTCTGCAAACTCTGGCGTCTGTAGATCTTGAGGTTTACATTTGATTGGATAAAGATGGACTCTGTAGTAAAACAATT  
AGGGTTTTGAGACGTTTGGACCGCAGACATCTAGAACTCCAAATGTAAAGCTAACCTATTTCTACCTGAGACATCATTTTTGTTAA

15,980

KIF5A

KIF5A-202

KIF5A-202

TGACAAGTCAGTCACCTATGATAGAGAACAAGCATTGTCTCATTACTCGTCCCAGAGATTTACCTCTAATGCATCTAGCCATCA  
ACTGTTTCAGTCAGTGGATACTATCTCTTGTTCGTAACAGAGTAAATGAGCAGGGTCTCTAAATGGAGATTACGTAGATCGGTAGT

16,065

KIF5A

KIF5A-202

KIF5A-202

AATATATTCATTGGTTAGCTTCCTAAGTTGTAAGTATTTTGTGTCCTTTATCATTCTTATCAGCACATGTGATTTACAACATATTC  
TTATATAAGTAACCAATCGAAGGATTCAACATTCATAAAACACAGAAATAGTAAGAATAGTCGTGTACACTAAATGTTGTATAAG

16,150

KIF5A

KIF5A-202

KIF5A-202

CTGAATTAACAAGGATTTGTAAGTCTGAATGATTTGCTTCACAGTCTTTTTTTTTTTGAGACGAAGTCTTGCTCTTGTCCCCCAG  
GACTTAATTTGTTCCCTAAACATTCAGACTTACTAAACGAAGTGTCAAGAAAAAAAAAACTCTGCTTCAGAACGAGAACAGGGGGTC

16,235

KIF5A

KIF5A-202

KIF5A-202

GCTGGAGTGCAGTGGCGCAATCTTGGCTCACTGCAACCTCCGCCTCCTGGGTTCAAGCGATTCTCCTGCCTCAGCCTCCGGCGTA  
CGACCTCACGTCACCGCGTTAGAACCGAGTGACGTTGGAGGCGGAGGACCCAAGTTCGCTAAGAGGACGGAGTCGGAGGCCGCAT

16,320

KIF5A

KIF5A-202

KIF5A-202

GCTGGGATTACAGGTGCCTGCCACCACGCCAGCTAATTTTTGTATTTTTAGTAGAGATGGGGTTTCAGCATGTTGGCCAGGCTG  
CGACCCTAATGTCCACGGACGGTGGTGCGGGTCGATTA AAAACATAAAAATCATCTCTACCCCAAAGTCGTACAACCGGTCCGAC

16,405

KIF5A

KIF5A-202

KIF5A-202

GTCTCGAACTCCTCACCTCAGGTGATCTGCCTGCCTTGGCCTCCCAAAGTGCTGGGATTACAGGCTTGAGCCACCGTGCCCGACC  
CAGAGCTTGAGGAGTGGAGTCCACTAGACGGACGGAACCGGAGGGTTTCACGACCCTAATGTCCGAACTCGGTGGCACGGGCTGG

16,490

KIF5A

KIF5A-202

KIF5A-202

CACAGTCTCTTTAATTAAGCTTGTCTGTTCTTAAAGGGAGACCCACATATCTGATTTTCATATATTCCTTTCACAAAGAGAG  
GTGTCAAGAAGAAATTAATTTGAAACAAGACAAGAATTTCCCTCTGGGTGTATAGACTAAAGTATATAAGGAAAGTGTCTCTCTC

16,575

KIF5A

KIF5A-202

KIF5A-202

AGAGCTTGTGTTAATGTTTCCACAGAGGCTCTCAGTGTAGACTGAATTTTCATTTACATGGTAGGGAACATGCTATAAATATATGT  
TCTCGAACACAATTACAAAGGTGTCTCCGAGAGTCACATCTGACTTAAAGTAAATGTACCATCCCTTGTACGATATTTATATACA

16,660

KIF5A

KIF5A-202

KIF5A-202

CACTAACTTTGCATCTTTCACCTTAGTACATCTAAAGATCTTTCATATCAGGGTACGTGGATCTGTTGAGGAAGATATTTCTAGC  
GTGATTGAAACGTAGAAAGTGAATCATGTAGATTTCTAGAAAGGTATAGTCCCATGCACCTAGACAACCTCTTCTATAAAGATCG

16,745

KIF5A

KIF5A-202

KIF5A-202

TTGAGATACTTTTATGTTAATGAATTGTTCTTCAATTTTTCATCACCTGTGGCCCTATTGTCTTTTTTTCATCTGGTTTTCCAGG  
AACTCTATGAAAAATCACAAATTACTTAACAAGAAGTTAAAAGTAGTGACACCCGGGATAACAGAAAAAAGTAGACCAAAGGGTCC

16,830

KIF5A

KIF5A-202

KIF5A-202

GAGGAGTTTGGGGTAGTGGAGTGCTCAATCATCACACCACGACTAAGATCCCCTAACACAATCTCACTGTGCGACACTCCTCTAC  
CTCCTCAAACCCCATCACCTCACGAGTTAGTAGTGTGGTGTCTGATTCTAGGGGATTGTGTTAGAGTGACACGCTGTGAGGAGATG

16,915

KIF5A

KIF5A-202

KIF5A-202

CCCACAGACACAACCTCCTGGCATCAGTACCTTTAGTTTCTTTATTCTCCCACATTTCTTTTTCTTTTCTTCTTTTTTTTTTTT  
GGGTGTCTGTGTTGAGGACCGTAGTCATGGAAATCAAAGAGAATAAGAGGGTGTAAAGAAAAGAAAAGAAGAAGAAAAA

17,000

KIF5A

KIF5A-202

KIF5A-202

GAGATGGAGTCTCGCTCTATCGCCAGGCTGGAGTGCAGTGGCGCAATCTCGGCTCACTGCAACCTCTGCCTCTCGGGTTCAAGCG  
CTCTACCTCAGAGCGAGATAGCGGTCCGACCTCACGTCACCGCGTTAGAGCCGAGTGACGTTGGAGACGGAGAGCCCAAGTTCGC

17,085

KIF5A

KIF5A-202

KIF5A-202

ATTCTCCTGTCTCTGCCTCCCGAGTAGCTGGGACTACAGGCACGTGCCACCACACCAGGCTAATTTTTGTATTTTTAGTAGAGAC  
TAAGAGGACAGAGACGGAGGGCTCATCGACCCTGATGTCCGTGCACGGTGGTGTGGTCCGATTA AAAACATAAAAATCATCTCTG

17,170

KIF5A

KIF5A-202

KIF5A-202

GGGGTTTCACCATATTGGTCAGGCTGGTCTTGAACCTCTGACCTCGTGATCCGCCTGCCTCAGCCTCTTAAAATGATGGGATTAC  
CCCCAAAAGTGGTATAACCAGTCCGACCAGA AACTTGAGGACTGGAGCACTAGGCGGACGGAGTCGGAGAATTTTACTACCCTAATG

17,255

KIF5A

KIF5A-202

KIF5A-202

AGGTGTGAGCCACCACGCCC GGCCATTCTCCCACATTTCTGTTTCAATTAAGGGCATTGAAGAAAAGGGTGCCTTTCTCAGCTGCTG  
TCCACACTCGGTGGTGC GGGCCGGTAAGAGGGTGTAAAGACAAGTAATTCCCGTA ACTTCTTTTCCCACGGAAAGAGTCGACGAC

17,340

KIF5A

KIF5A-202

KIF5A-202

GAAGGAGGTTGTGGTATTTCTTTTCCCTCACATCCTGCCTGTTGACGTCTGATATCTTTTATTTTCATTCCAGGGGAAGCCATAT  
CTTCCTCCAACACCATAAAGAAAAGGGAGTGTAGGACGGACAACCTGCAGACTATAGAAAAATAAAAGTAAGGTCCCCTTCGGTATA

17,425

KIF5A

KIF5A-202

45  
G K P Y  
ENSE00001264365

KIF5A-202

GTTTTTGACCGTGTATTCCCCCAAACACGACTCAAGAGCAAGTTTATCATGCATGTGCCATGCAGATTGTCAAAGGTAATAGAT  
CAAAAACCTGGCACATAAGGGGGGTTTGTGCTGAGTTCTCGTTCAAATAGTACGTACACGGTACGTCTAACAGTTTCCATTATCTA

17,510

KIF5A

KIF5A-202

50 55 60 65 70  
V F D R V F P P N T T Q E Q V Y H A C A M Q I V K

ENSE00001264365

KIF5A-202

TTCTTTTGAATGTCTCTTCTCAGCACCCCATTTCTACCCGACCTATCTCCACCAGTACTCTTTTCTCTACTGTCTCTTCCAGA  
AAGAAAAATCTTACAGAGAAGAGTCTGTGGGGTAAAGGATGGGCTGGATAGAGGTGGTCATGAGAAAAGAGATGACAGAGAAGGTCT

17,595

KIF5A

KIF5A-202

D

KIF5A-202

TGTCCTTGCTGGCTACAATGGCACCATTTTTGCTTATGGACAGACATCCTCAGGGAAAACACATACCATGGAGGTGAGGGTTCTG  
ACAGGAACGACCGATGTTACCGTGGTAAAAACGAATACCTGTCTGTAGGAGTCCCTTTTGTGTATGGTACCTCCACTCCCAAGAC

17,680

KIF5A

KIF5A-202

75 80 85 90 95  
V L A G Y N G T I F A Y G Q T S S G K T H T M E

ENSE00001264360

KIF5A-202

GCTTTGGTGGTTGAGGGGCTAGGAGTGTTAATGGAAGATCAGGGAATCTCAGTGGGGGAAGGTCTAGGAATCAAGGATTGCCTGG  
CGAAACCACCAACTCCCCGATCCTCACAATTACCTTCTAGTCCCTTAGAGTCAACCCCTTCCAGATCCTTAGTTTCTAACGGACC

17,765

KIF5A

KIF5A-202

KIF5A-202

TCCAGAGGCAGATAGATGAGTACAGAGGATGAACTGAAGGGCAATATTAGGGGAAGTTTAAATGGAATCCCTCCAACCCACTGCAG  
AGGTCTCCGTCTATCTACTCATGTCTCCTACTTGACTTCCCGTTATAATCCCTTCAAATTACCTTAGGGAGGTTGGGTGACGTC

17,850

KIF5A

KIF5A-202

KIF5A-202

TGGATCATCCTTTCCACTACTCCAGTCTTCTTTTGATCGGGAAAAGCAATGGAAGTCCAAAGGGCTACTCAATTATCTCCTTGCT  
ACCTAGTAGGAAAAGGTGATGAGGTCAGAAGAAAACCTAGCCCTTTTCGTTACCTTCAGGTTTCCCGATGAGTTAATAGAGGAACGA

17,935

KIF5A

KIF5A-202

KIF5A-202

CCTCTAAAAGGCAGACATGGTGGTGACCATCTCCTAACTTAGGATGTTCTTCTTATTGACTCTTGCCTTGGTGTTCACCTGCATA  
GGAGATTTTCCGTCTGTACCACCACTGGTAGAGGATTGAATCCTACAAGAAGAATAACTGAGAACGGAACCACAAGTGGACGTAT

18,020

KIF5A

KIF5A-202

KIF5A-202

CATCTGAGTTGTCTCATTCTCCCTGAGCCCCAGCTTCACTCTCAAATACCTTCACTCGCCAGGGAAAGCTGCACGACCCCTCAGCT  
GTAGACTCAACAGAGTAAGAGGGACTCGGGGTCGAAGTGAGAGTTTATGGAAGTGAGCGGTCCTTTTCGACGTGCTGGGAGTCTGA

18,105

KIF5A

KIF5A-202

100 105  
G K L H D P Q L

ENSE00001656581

KIF5A-202

GATGGGAATCATTCTCGAATTGCCCGAGACATCTTCAACCACATCTACTCCATGGATGAGAACCTTGAGTTCCACATCAAGGTG  
CTACCCTTAGTAAGGAGCTTAACGGGCTCTGTAGAAGTTGGTGTAGATGAGGTACCTACTCTTGGAACTCAAGGTGTAGTTCCAC

18,190

KIF5A

KIF5A-202

110 115 120 125 130  
M G I I P R I A R D I F N H I Y S M D E N L E F H I K

ENSE00001656581

KIF5A-202

ACCAGGGCACGACAGCTGGGCATTGAGATGGGGACTGGGAGGGGAAGATCTAAAATCTTCCCCTGAAGAGCCTGGGCTCCCCAA  
TGGTCCCGTGCTGTGACCCGTAAGTCTACCCCTGACCCCTCCCCTTCTAGATTTTAGAAGGGTGACTTCTCGGACCCGAGGGGTT

18,275

KIF5A

KIF5A-202

KIF5A-202

CTTGACTCCCTTTCCGGTTACCAGAGTTCTTTGTCAAGATGTTCTTCTTCTTCTTTTCTCCCACCACCGTTTGAGCAGGTCAC  
GAACTGAGGGAAAGGCCAATGGTCTCAAGAAACAGTTCTACAAGAGAAGACAAGAAAAGGAGGGTGGTGGCAAACCTCGTCCAGTG

18,360

KIF5A

KIF5A-202

KIF5A-202

ATTAGTATGGGATTCCTGAACTAGATTTAAGATAGGCCCTCTTACTTCACACTCCTTCTTCTTCTTAAACCAGGTTTCTTACTT  
TAATCATACCCTAAGGACTTGATCTAAATTCTATCCGGGAGAAATGAAGTGTGAGGAAGAAAGAAGAATTGGTCCAAAGAATGAA

18,445

KIF5A

KIF5A-202

135  
V S Y F

ENSE00001264...

KIF5A-202

TGAAATTTACCTGGACAAAATTCGTGACCTTCTGGATGGTGAGTGTTTTGTCCCAGTGGATGAGGGTGTGTGAGGAGGGTGGAGA  
ACTTTAAATGGACCTGTTTTAAGCACTGGAAGACCTACCACTCACAAAACAGGGTCACCTACTCCCACACACTCCTCCCACCTCT

18,530

KIF5A

KIF5A-202

140 145  
E I Y L D K I R D L L D

ENSE00001264351

KIF5A-202

AAAGAAAAGCTCACATTGCATTTGGAATTAGGTACCAATTGACAAGAGATGCAGAGGGGCACACAGCACCCAAGTCTTTTGGCCCCG  
TTTCTTTTCGAGTGTAACGTA AACCTTAATCCATGGTTAACTGTTCTCTACGTCTCCCGTGTGTCGTGGGTTTCAGAAAAACCGGGGC

18,615

KIF5A

KIF5A-202

KIF5A-202

TTTACCAGAATTTCCAAAACTGAGAAGGTCAGGAGATGAGCTTAGCAGCCAAGGACTACATATAAACAGTTTCGAGAGGATCTGG  
AAATGGTCTTAAAGGTTTTTGA CTCTTCCAGTCCTCTACTCGAATCGTCGGTTCTCTGATGTATATTTGTCAAGCTCTCCTAGACC

18,700

KIF5A

KIF5A-202

KIF5A-202

GGCCGAGGAGCAGGAGCCCTGAGGAGGAGAAGGAGGAGGA ACTGAGCCTTCAGCTCGTGCAGGGAGTTTAGGCTTCACAGGGAGA  
CCGGCTCCTCGTCTCGGGACTCCTCCTCTTCTCCTCCTTGACTCGGAAGTCGAGCACGTCCCTCAAATCCGAAGTGTCCCTCT

18,785

KIF5A

KIF5A-202

KIF5A-202

GTCTTCCTTTAGCACAGAGAAGAAAACCACCATCTGAGCTGACTGCAAGGTGCAGATGGGGGCGGTGGAAGTACTAGTCTTGCTT  
CAGAAGGAAATCGTGTCTTCTTTTGGTGGTAGACTCGACTGACGTTCCACGTCTACCCCCGCCACCTTCATGATCAGAACGAA

18,870

KIF5A

KIF5A-202

KIF5A-202

ACCCTGCATTCTTTTGATTGAGTGACCAAGACAAATCTGTCCGTGCACGAGGACAAGAACC GGGTGCCATTTGTCAAGGTGAGAG  
TGGGACGTAAGAAA ACTAAGTCACTGGTTCTGTTTAGACAGGCACGTGCTCCTGTTCTTGGCCACGGTAAACAGTTCCACTCTC

18,955

KIF5A

KIF5A-202

V T K T N L S V H E D K N R V P F V K

ENSE00001264346

KIF5A-202

TGGGTGTGGGGCACCTATGTGGGGCCAGTGTATTGAGAATGTTGGTGGGGGAGGAGCATAGGTCAGTGACCCTGAAGTTGGAGGG  
ACCCACACCCCGTGGATACACCCCGGTCACATAACTCTTACAACCACCCCTCCTCGTATCCAGTCACTGGGACTTCAACCTCCC

19,040

KIF5A

KIF5A-202

KIF5A-202

TGGATATCCTGGAGGAATGAGATGTGCCTAGGGGCCAGGGAGAGTCTAGGGGATCAGAAAAGATACTGTCTTGGCTGGGCATGGT  
ACCTATAGGACCTCCTTACTCTACACGGATCCCCGGTCCCTCTCAGATCCCCTAGTCTTTTCTATGACAGAACCGACCCGTACCA

19,125

KIF5A

KIF5A-202

KIF5A-202

GGCTCATACTGTAATCCCAGCACTTTGGGAGGGCTGAGGTGGGTGGATCACTTGAGGCCGGGAGTTCAAGACCAGCCTGGCCAAT  
CCGAGTATGGACATTAGGGTCGTGAAACCCTCCGACTCCACCCACCTAGTGAACCTCCGGCCCTCAAGTTCTGGTCGGACCGGTTA

19,210

KIF5A

KIF5A-202

KIF5A-202

ATAGTGAAACCCCGTTTTCTACTAAAAATACAAAAAATTAACCTGGGCGTGGTGGCACATGCTTGTAATCCCAGCTATTTGGGACAC  
TATCACTTTGGGGCAAAGATGATTTTTATGTTTTTAATTGACCCGCACCACCGTGTACGAACATTAGGGTCGATAAACCCCTGTG

19,295

KIF5A

KIF5A-202

KIF5A-202

TGAAGCAGGAGAATCTCTTGAACCTGGGAGGCAGAGGTTGCGGTGAGCCGAGATTGCGCCACTGCACTCCAGCCTGGGCGACAGA  
ACTTCGTCTCTTAGAGAACTTGACCCCTCCGTCTCCAACGCCACTCGGCTCTAACGCGGTGACGTGAGGTCGGACCCGCTGTCT

19,380

KIF5A

KIF5A-202

KIF5A-202

GTGAGAACCTGTCTTTAAAAAAGAAAGAAAAGAAAAGATACTGTCTTGAAAGGTCATTGGTCAGTGTGCATGCAATTTAATTT  
CACTCTTGACAGAAATTTTTTTCTTCTTTCTTTCTATGACAGAACTTTCCAGTAACCAGTCACACGTACGTTAAATTTAA

19,465

KIF5A

KIF5A-202

KIF5A-202

GCAAATCAAAGTTTACTGGAAGAAATGCCTGTAATCCCAACACTTTAGAAGGCTGAGGTGGGAGGATCACTTGAGGAGTTCAAGA  
CGTTTAGTTTCAAATGACCTTCTTTACGGACATTAGGGTTGTGAAATCTTCCGACTCCACCCTCCTAGTGAACCTCCTCAAGTTCT

19,550

KIF5A

KIF5A-202

KIF5A-202

TCAGCCTGGCCAACATAGCAAGACCCGTCTCTTATTTAATCTAATTTTTTTTTTTTTTTTTTTTTTTTTTTGGAGACAGAGTCTCACTCT  
AGTCGGACCGGTTGTATCGTTCTGGGCAGAGAGAATAAATTAGATTAAAAAACCTCTGTCTCAGAGTGAGA

19,635

KIF5A

KIF5A-202

KIF5A-202

GTTGCCAGGCTGGAGTGCAGTGGCTCGACCTAGGGTCACTGCAACCTCCCTGTCTTGGGTTCAAACGATTCTCCTGCGTCAGGC  
CAACGGGTCGACCTCACGTCACCGAGCTGGATCCAGTGACGTTGGAGGGACAGGACCCAAGTTTGCTAAGAGGACGCAGTCCG

19,720

KIF5A

KIF5A-202

KIF5A-202

TCCCGAGTAGCTGGGACTACAGGCATGTGCCACCACGCCTGGCTGATTTTTAGTATTTTTAGTAGAGACGGGGTTTTACCATGTTG  
AGGGCTCATCGACCCTGATGTCCGTACACGGTGGTGC GGACCGACTAAAATCATAAAAATCATCTCTGCCCCAAAGTGGTACAAC

19,805

KIF5A

KIF5A-202

KIF5A-202

GCCAGGCTGGTCTCTAATTCCTGACCTCAGGTGATCCACCTGCCTCAGCCTCCCAAAGTGCTGGAATTACAGGCATGAGCCACTA  
CGGTCCGACCAGAGATTAAGGACTGGAGTCCACTAGGTGGACGGAGTCCGGAGGGTTTTACAGACCTTAATGTCCGTACTCGGTGAT

19,890

KIF5A

KIF5A-202

KIF5A-202

TGCTGAGTCTCTTGTTTAAAAAAAAAAAAAAAAATTTTTGTGTCAGGCATGGTGGCACACACCTGTAGTCCCAGCTACTCAGGAGGCTG  
ACGACTCAGAGAACAATTTTTTTTTTTTTTTTTAAAAACAGTCCGTACCACCGTGTGTGGACATCAGGGTCGATGAGTCCCTCCGAC

19,975

KIF5A

KIF5A-202

KIF5A-202

AGGCGGGAGAATTGCTTGAGCTCAAGAGTTTGGAGTTGCAGTGAGCCATGATAGTGCCACTGCACTCCAGCCTGTGTAGTAGAGA  
TCCGCCCTCTTAACGAACTCGAGTTCTCAAACCTCAAACGTCACTCGGTACTATCACGGTGACGTGAGGTCGGACACATCATCTCT

20,060

KIF5A

KIF5A-202

KIF5A-202

GACAGTGGTTTTTTTTGTTTGTGTTTGTGTTTGTGTTTGGAGACAGATTCTCACTCTGTCACCCAGGCTGTAGTGCAATGGCATGAT  
CTGTCACCAAAAAAAAAACAACAAACAAACAAACAAACCTCTGTCTAAGAGTGAGACAGTGGGTCCGACATCACGTTACCGTACTA

20,145

KIF5A

KIF5A-202

KIF5A-202

CTTGGCTCACTGCAACCTCTGCCTCCTGGGTTCAAGTGATTCTCCTGCCTCAGCCTCCCAAGCATATGGGATTATAGGTGCCTGC  
GAACCGAGTGACGTTGGAGACGGAGGACCCAAGTTCACTAAGAGGACGGAGTCCGGAGGGTTCGTATACCCTAATATCCACGGACG

20,230

KIF5A

KIF5A-202

KIF5A-202

CACCAGGCCCACTTATTTTTGTATTTTTAGTAGAGATGGGGTTTTACCATGTTAGCCAGGCTAGTCTCGAACTCCTGACCTCAGG  
GTGGTCCGGGTGAATAAAAAACATAAAAATCATCTCTACCCCAAAGTGGTACAATCGGTCCGATCAGAGCTTGAGGACTGGAGTCC

20,315

KIF5A

KIF5A-202

KIF5A-202



TGATCCGCCACCTCAGCCTCCCAAGTGTGCTGGCATTACAGGCATAAGCCACTGCACCTGGCTGCGACAGTGTTTTTTTTTTTTTTTT  
ACTAGGCGGGTGGAGTCGGAGGGTACACGACCGTAATGTCCGTATTCGGTGACGTGGACCGACGCTGTCCACAAAAAAAAAAAAA

20,400

KIF5A

KIF5A-202

KIF5A-202

GAGACAGAGTTTCTCTCTTGTGGCCAGGCTGGGGTACAGTGGCGCCCGATCTTGGCTTACTGCAACCTCAGCCTCCCGAGTTCA  
CTCTGTCTCAAAGAGAGAACAACGGGTCCGACCCCATGTACCGCGGGCTAGAACC GAATGACGTTGGAGTCGGAGGGCTCAAGT

20,485

KIF5A

KIF5A-202

KIF5A-202

AGTGATTCTCCTGCCTCAGCCTCCTGAGTAGCTGGAATTACAGGCATGTGCCACCACGTCTGGCTAATTTTGTATTTTTAGTGGA  
TCACTAAGAGGACGGAGTCGGAGGACTCATCGACCTTAATGTCCGTACACGGTGGTGCAGACCGATTAAACATAAAAAATCACCT

20,570

KIF5A

KIF5A-202

KIF5A-202

GATGGGATTTTGGCCATGTTGGCCAGGCTGGTACGAACTCCTGACCTCAGGTGATCCACCCACATTGGCCTCCCAAACCAAAGTG  
CTACCCTAAAACGGTACAACCGGTCCGACCAAGTGTGAGGACTGGAGTCCACTAGGTGGGTGTAACCGGAGGGTTTTGGTTTCAC

20,655

KIF5A

KIF5A-202

KIF5A-202

CTGGGATTACAGGCGTGAGCCACCATGCCCGCCACTGTTTCAAAAAAGTAGTAAATACGTAAGATAAAAAATAAATACAAAGCAGG  
GACCCTAATGTCCGCACTCGGTGGTACGGGCGGTGACAAAAGTTTTTTCATCATTATGCATTCTATTTTTATTTATGTTTCGTCC

20,740

KIF5A

KIF5A-202

KIF5A-202

GCATGGTGGCTCAAGCCTGTAATCCCAGCACTTTGGGAGGCCAAGGCAGGCGGATCACGAGGTCAGGACTTTGAGACCAGCCTGA  
CGTACCACCGAGTTCGGACATTAGGGTTCGTGAAACCTCCGGTTCCGTCCGCCTAGTGCTCCAGTCTGAAACTCTGGTCGGACT

20,825

KIF5A

KIF5A-202

KIF5A-202

CCAACATGGTGAAACCCCGTCTCTACTAAAAATACAAAAATTAGCCGGGCGTGTGGCTCATGCCTGTAATCCCAGCTACTCTGG  
GGTTGTACCACTTTGGGGCAGAGATGATTTTTATGTTTTAATCGGCCCGCACAAACCGAGTACGGACATTAGGGTCGATGAGACC

20,910

KIF5A

KIF5A-202

KIF5A-202

AGGCTGAGGCAAGAGAATCGCTTGAACCTGGGAGGTGGAGGTTGCAGTGAGCTGAGATTCTTGACACTGCACTCCAGCCTGGGCA  
TCCGACTCCGTTCTCTTAGCGAACTTGGACCCTCCACCTCCAACGTCACCTCGACTCTAAGAACTGTGACGTGAGGTCGGACCCGT

20,995

KIF5A

KIF5A-202

KIF5A-202

GAGCGAGACTCCATCTCAAAAGAAAATAATAATAATAAAAAATAATAATAATAATAACAACTTAAAAACAAAGCTTATGGGTCAC  
CTCGCTCTGAGGTAGAGTTTTCTTTTATTATTATTTTTATTTATTTATTTATGTTTGAATTTTTTGTTCGAATACCCAGTG

21,080

KIF5A

KIF5A-202

KIF5A-202

TGTCCATTTGTCCCCACAGGGTTGTAAGTGAACGCTTTGTGTCCAGCCCCGAGGAGATTCTGGATGTGATTGATGAAGGGAAATC  
ACAGGTAACAGGGGGTGTCCCAACATGACTTGCGAAACACAGGTCGGGCCCTCCTCTAAGACCTACACTAACTACTTCCCTTTAG

21,165

KIF5A

KIF5A-202

G C T E R F V S P E E I L D V I D E G K S  
ENSE00001264336

KIF5A-202

AAATCGTCATGTGGCTGTCACCAGTGAGTGAGGATACAAGGGGATCTCTCGAGTCTGAGGATCCACTTGTGTTCTGTGTCCTCTG  
TTTAGCAGTACACCGACAGTGGTCACTCACTCCTATGTTCCCTAGAGAGCTCAGACTCCTAGGTGAACACAAGACACAGGAGAC

21,250

KIF5A

KIF5A-202

N R H V A V T  
ENSE00001264336

KIF5A-202

GGGTGGAGGGACTCAAAAGTGAGCAAGGAAACTGTACCCCCAGAGGAGGAGGACCCCTTGTCTGTGGGACCCTGCTGCCTGGGA  
CCCACCTCCCTGAGTTTTCACTCGTTCTTTGACATGGGGGGTCTCCTCCTCCTGGGGAACAGACACCCTGGGACGACGGACCCCT

21,335

KIF5A

KIF5A-202

KIF5A-202

GATGTGGCAGCAGGGCTAGTCCTGGTGGGCACCTTCTCTCTGGGTGGGCGGGGCTGGGGTCAGTGGAAAGCCGGGGGCTGAGGACC  
CTACACCGTCGTCCCGATCAGGACCACCCGTGGAAGAGAGACCCACCCGCCCCGACCCAGTCACCTTCGGCCCCGACTCCTGG

21,420

KIF5A

KIF5A-202

KIF5A-202

TCAGTTCTGCAGGGTGGTGCAGGTCCTGTTTCTCCCTTGCTCCTGCAGACATGAATGAACACAGCTCTCGGAGCCACAGCATCTT  
AGTCAAGACGTCCACCACGTCCAGGACAAAGAGGGAAACGAGGACGTCTGTACTTACTTGTGTCGAGAGCCTCGGTGTGCTAGAA

21,505

KIF5A

KIF5A-202

N M N E H S S R S H S I F  
ENSE00001769835

KIF5A-202

CCTCATCAACATCAAGCAGGAGAACATGGAAACGGAGCAGAAGCTCAGTGGGAAGCTGTATCTGGTGGACCTGGCAGGGAGTGAG  
GGAGTAGTTGTAGTTCGTCTCTTGTACCTTTGCCTCGTCTTTCGAGTCAACCTTCGACATAGACCACCTGGACCGTCCCTCACTC

21,590

KIF5A

KIF5A-202

210 L I N I K Q E N M E T E Q K L S G K L Y L V D L A G S E 215 220 225 230 235

ENSE00001769835

KIF5A-202

AAGGTAGGGGGTCTGTGGATATGGGGTGGGTGGAAGCCTTGGCTCTTTTTTTTTTTTTTTTTTTTGGACAGAGTCTCACTCTGTGCG  
TTCCATCCCCCAGGACACCTATACCCACCCACCTTCGGAACCGAGAAAAAATACTCTGTCTCAGAGTGAGACAGC

21,675

KIF5A

KIF5A-202

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KIF5A-202

CCCGGGCTGGTTTTGCAGTGGCACGATCTCTGTTCACTGCAACCTCCGCCTCCTGGGTTTTAAGTGATTCTCCTGCCTAAACCTTCC  
GGGCCCGACCAAACGTCACCGTGCTAGAGACAAGTGACGTTGGAGGCGGAGGACCCAAATTCACCTAAGAGGACGGATTTGGAAGG

21,760

KIF5A

KIF5A-202

KIF5A-202

AAGTAGCTGGGATTACAGGTGCCACCACCACGCCTGGCTAATTTTTTGTATTTTTAGTAGAGAGGGGATTTCACTGTGTTGGCC  
TTCATCGACCCTAATGTCCACGGGTGGTGGTGCAGGACCGATTAAAAAACATAAAAAATCATCTCTCCCTAAAGTGACACAACCGG

21,845

KIF5A

KIF5A-202

KIF5A-202

AGGCTGGTCCTTGGCTCTTTTTTTTTTTTTTTTGGACGGATTCTTGCTCTGTACCCAGGTTGGAGTGCAGTGGCACGCTCTCAGCT  
TCCGACCAGGAACCGAGAAAAAATACTCTGCCTAAGAACGAGACAGTGGGTCCAACCTCACGTACCGTGCGAGAGTCTCGA

21,930

KIF5A

KIF5A-202

KIF5A-202

CACTGCAACCCCTGCCTCCAGGTTCAAGTGATTTTCTGCCTCAGCCTCCCTAGTAGCTGGGATTACAGGCTCCCGCCACCAAG  
GTGACGTTGGGGACGGAGGGTCCAAGTTCACTAAAAGGACGGAGTCCGAGGGATCATCGACCCTAATGTCCGAGGGCGGTGGTTT

22,015

KIF5A

KIF5A-202

KIF5A-202

CCCAGCTAATTTTTGTATTTTTAGTAGAGACGGGGTTTACCATGTTGGCCAGGCTGGTCTCGAACTCCTGACCTCGGGATCCAC  
GGGTGCGATTAAAAAACATAAAAAATCATCTCTGCCCAAAGTGGTACAACCGGTCCGACCAGAGCTTGAGGACTGGAGCCCTAGGTG

22,100

KIF5A

KIF5A-202

KIF5A-202

CTGCCTCGGCCTCCCAAAGTGCTGGGACTACAGGCATGAGCCACTGTGCCCGGCCGACTCTTTTTTAACTAAAAAATGATTTGCA  
GACGGAGCCGGAGGGTTTCACGACCCTGATGTCCGTA CTGGTGACACGGGCGGCTGAGAAAAAATTGATTTTTTACTAAACGT

22,185

KIF5A

KIF5A-202

KIF5A-202

TTGGGATATAATTACATACCATAAAGTTCACCATTTTAAAGTGCAATTCAGTTGTTTGTAGTATGTTCCCAAGGTTGTGCAACC  
AACCCATATTAAGTGTATGGTATTTCAAGTGGTAAAATTTACGTTAAGTCAACAAACATCATACAAGGGTTCCAACACGTTGG

22,270

KIF5A

KIF5A-202

KIF5A-202

ATTACGCTATCCAATTCTAGAGCACTGTCATCTTCTATTACAGTCACTCTCCATTGTCCCCTAACCCCATCCCCTGTCAACTTC  
TAATGCGATAGGTTAAGATCTCGTGACAGTAGAAGATAAGTGTGAGGAGGTAACAGGGGATTGGGGTAGGGGACAGTTGAAG

22,355

KIF5A

KIF5A-202

KIF5A-202

TAATCTACTTTCTGTCTCTATGGATTTGCCTATCCTGAACATTTTCATATAAATGGAATCATATGGCTGGGCACGGTGGCTCACAC  
ATTAGATGAAAGACAGAGATACCTAAACGGATAGGACTTGTAAGTATATTTACCTTAGTATACCGACCCGTGCCACCGAGTGTG

22,440

KIF5A

KIF5A-202

KIF5A-202

CTGTAATCCCAGCACTTTGCGAGGCCGAGGTGGGTGGATCACCTGAGGTCGGGAGTTCGAGACCAGCCTGGCCAACATAGAGAAA  
GACATTAGGGTTCGTGAAACGCTCCGGCTCCACCCACCTAGTGGACTCCAGCCCTCAAGCTCTGGTTCGGACCGGTTGTATCTCTTT

22,525

KIF5A

KIF5A-202

KIF5A-202

CCCCATCTCTACAAAAAATGCAAAATTAGCTGGGCGTGGTGGCACATGCCTGTAATCCCAGCTGCTCAGGAGGCTGAGGCAGGAT  
GGGGTAGAGATGTTTTTTACGTTTTAATCGACCCGCACCACCGTGTACGGACATTAGGGTTCGACGAGTCTCCGACTCCGTCTTA

22,610

KIF5A

KIF5A-202

KIF5A-202

AACCGCTTGAACCTGGGAGGCCGGAGGTTGTGGTGAGCTGAGATCGCACCATTTGCACTCCAGCCTGCGCAACAAGAGTGAAACTCC  
TTGGCGAACTTGGACCCCTCCGCCTCCAACACCACTCGACTCTAGCGTGGTAAACGTGAGGTCGGACGCGTTGTTCTCACTTTGAGG

22,695

KIF5A

KIF5A-202

KIF5A-202

PCR Forward

TGTAATATGTGGCAGGGGTTAGGGG

ATCTCAAAAAAAAAAAGGAATCATGTAATATGTGGCAGGGGTTAGGGGCAATGTGGTGTGGTGGACAAGACAGTTTAGGGGAACA
TAGAGTTTTTTTTTTTTTTCCTTAGTACATTATACACCGTCCCCAATCCCCGTTACACCACAAACTGTTCTGTCAAATCCCCTTGT

22,780

KIF5A

KIF5A-202

KIF5A-202

GAGGAAGGGCCTTCCCCAATCCCAGCCAAGCATCTCTGTTACTCCATCTTCTTCCCTGTTCCCTTCCCTCCTCCGTGGACTGAGCC
CTCCTTCCCGGAAGGGGTTAGGGTTCGGTTCGTAGAGACAATGAGGTAGAAGAAGGGACAAGGAAGGAAGGAGGCACCTGACTCGG

22,865

KIF5A

KIF5A-202

KIF5A-202

Sanger Sequencing

TGGAACGAGGTGGTGCAGC

CTGGAACGAGGTGGTGCAGCCCTCTCCATGTGCAGCTGCTCATACACACTCATCTTACTGCCCTGGTAGGTCAGCAAGACTG
GACCTTGCTCCACCACTGTCCGGGAGAGGTACACGTCGACGAGTATGTGTGAGTAGAGAATGACGGGACCATCCAGTCGTTCTGAC

22,950

KIF5A

KIF5A-202

240
V S K T
ENSE00001619453

KIF5A-202

gRNA Protospacer

CAACAAGTCACTGTCAGCTC

GAGCAGAGGGAGCCGTGCTGGACGAGGCAAGAATATCAACAAGTCACTGTCAGCTCTGGGCAATGTGATCTCCGCACTGGCTGA
CTCGTCTCCCTCGGCACGACCTGCTCCGTTTCTTATAGTGTTCAGTGACAGTTCGAGACCCGTTACACTAGAGGCGTGACCGACT

23,035

KIF5A

KIF5A-202

G A E G A V L D E A K N I N K S L 245 250 255 260 265 270
ENSE00001619453

KIF5A-202

Donor Template WT -> SNV

Protospacer Sequence PAM

SNV

CCTGCTCCGTTTCTTATAGTGTTCAGTGACAGTTCGAGACCCGTTACACTAGAGGCGTGACCGACT
Donor Template WT -> SNV

GGGCACTGTGAGTGATCCTTAGGTCCCCTCACCCCTCAAGCCACACCCCATCTCCTCCCCACCTGCTAATGCCACCATATGATC
CCCCTGACACTCACTAGGAATCCAGGGGAGTGGGGAGTTCGGTGTGGGGTAGAGGAGGGGGTGGACGATTACGGTGGTATACTAG

23,120

KIF5A

KIF5A-202

G T
ENSE000...

KIF5A-202

Donor Template WT -> SNV

CCCGTGACACTCACTAGGAATCCAGGGGAGTGGG

Donor Template WT -> SNV

ATGCCCAATTCATGGGTTGTCTGATCCCGGGGTGGCACCACCTATCCTTTCTGATTCCCTGTTGAATTTTATTTGTTTATTTCTG  
TACGGGGTTAAGTACCCAACAGACTAGGGCCCCACCGTGGTGATAGGAAAGACTAAGGGACAACCTTAAAAATAAACAAATAAAGAC

23,205

KIF5A

KIF5A-202

KIF5A-202

ATTCTGGTCTCCTTCCTCCCCAGAAAAGCTATGTTCCATATCGTGACAGCAAATGACAAGGATTCTCCAGGACTCTCTCGGG  
TAAGGACCAGAGGAAGGAGGGGGTCTTTTCGATACAAGGTATAGCACTGTCGTTTTACTGTTTCTAAGAGGTCCTGAGAGAGCCC

23,290

KIF5A

KIF5A-202

275 280 285 290  
K S Y V P Y R D S K M T R I L Q D S L G

ENSE00001264317

KIF5A-202

GGAAACTGCCGGACGACTATGTTTCATCTGTTGCTCACCATCCAGTTATAATGATGCAGAGACCAAGTCCACCCTGATGTTTGGGC  
CCTTTGACGGCCTGCTGATACAAGTAGACAACGAGTGGTAGGTCAATATTACTACGTCTCTGGTTCAGGTGGGACTACAAACCCG

23,375

KIF5A

KIF5A-202

295 300 305 310 315 320  
G N C R T T M F I C C S P S S Y N D A E T K S T L M F G

ENSE00001264317

KIF5A-202

AGCGGTCAGTGGCAGGGTCCCCAGAGGGATCCCTGGTACCCAGCTTCCCATCCCAGCCTCTGCGGCTCTCTCTCCTCAGGGTCAC  
TCGCCAGTCACCGTCCCAGGGGTCTCCCTAGGGACCATGGGTGCAAGGGTAGGGTCGGAGACGCCGAGAGAGAGGAGTCCCAGTG

23,460

KIF5A

KIF5A-202

Q R

EN...

KIF5A-202

CCAAGTCTCATGTTGCTCTCATTTCTTTGTTCCCTCTTCTCCTCACCCAGGGCAAAGACCATTAAGAACACTGCCTCAGTAAATTT  
GGTTCAGAGTACAACGAGAGTAAAGAAAACAAGGAGAAGAGGAGTGGGTCCCCTTTCTGGTAATTCTTGTGACGGAGTCATTTAAA

23,545

KIF5A

KIF5A-202

325 330 335  
A K T I K N T A S V N L

ENSE00001140469

KIF5A-202

GTGGGTCCCCTTTCTGGTAATTCTT

PCR Reverse

GGAGTTGACTGCTGAGCAGTGGGAAGAAGAAAATATGAGAAGGAGAAGGAGAAGACAAAAGGCCAGAAAGGAGACGATTGCGAAGCTG  
CCTCAACTGACGACTCGTCACCTTCTTTATACTCTTCTTCTTCTTCTGTTTCCGGGTCTTCTCTGCTAACGCTTCGAC

23,630

KIF5A

KIF5A-202

340 345 350 355 360  
E L T A E Q W K K Y E K E K E K T K A Q K E T I A K L

ENSE00001140469

KIF5A-202

GAGGCTGAGCTGAGCCGGTGGCGCAATGGTTAGAGAGGGATAGGTGGGAGTGAGGGGGCAGTGGGAAGAGGAGGAGGATGTTTGGG  
CTCCGACTCGACTCGGCCACCGCGTTACCAATCTCTCCCTATCCACCCTCACTCCCCGTCAACCCTTCTCCTCCTCCTACAAACCC

23,715

KIF5A

KIF5A-202

365 370  
E A E L S R W R N  
ENSE00001140469

KIF5A-202

AGCCAACCTCTGTTTGGGTGGTGGTTTCTGGCCAGGCCAATCTCCTAGAAGAGGGGCTGTGTTTCTGGACAGGTGCAGTAGAGCAGT  
TCGGTTGAGACAAACCCACCACAAAGACCGGTCCGGTTAGAGGATCTTCTCCCCGACACAAAGACCTGTCCACGTCACTCTCGTCA

23,800

KIF5A

KIF5A-202

KIF5A-202

CATGGGGGAAGGGAGGGGCCTGACTACCTACCTCCATACTCCAAAAGGTAGAGGGTCCACCTGGCAAGAGAGTTCAAGGGGCA  
GTACCCCTTCCCTCCCCGGACTGATGGATGGAGGGTATGAGGGTTTTCCATCTCCCAGGTGGACCGTTCTCTCAAGTTCCCCGT

23,885

KIF5A

KIF5A-202

KIF5A-202

TGGTGAGTGAGAAGGAAGAACTCGTGGATGCAGCTTCTTCTTCCATCTCTCACCTCGTCTTGCCCTTTGCAGGAGAGAATG  
ACCACTCACTCTTCTTCTTGGAGCACCTACGTGGAAGAAGAAGGTTAGAGAGTGGAGCAGAACGGGGAAACGTCTCTCTTAC

23,970

KIF5A

KIF5A-202

375  
G E N  
ENSE000011...

KIF5A-202

TGCCTGAGACAGAGCGCCTGGCTGGGGAGGAGGCAGCCCTGGGAGCCGAGCTCTGTGAGGAGACCCCTGTGAATGACAACTCATC  
ACGGACTCTGTCTCGCGGACCGACCCCTCCTCCGTCGGGACCCCTCGGCTCGAGACACTCCTCTGGGGACACTTACTGTTGAGTAG

24,055

KIF5A

KIF5A-202

380 385 390 395 400  
V P E T E R L A G E E A A L G A E L C E E T P V N D N S S  
ENSE00001140460

KIF5A-202

CATCGTGGTGCGCATCGCGCCCGAGGAGCGGCAGAAATACGAGGAGGAGATCCGCCGTCTCTATAAGCAGCTTGACGACAAGGTTG  
GTAGCACCACGCGTAGCGCGGGCTCCTCGCCGTCTTTATGCTCCTCCTCTAGGCGGCAGAGATATTGTCGAACCTGCTGTTCCAC

24,140

KIF5A

KIF5A-202

405 410 415 420 425 430  
I V V R I A P E E R Q K Y E E I R R L Y K Q L D D K  
ENSE00001140460

KIF5A-202

AGGGCGGCCAGGCAGGGCACTGAGGCACGCCAGGTGGGATGAGAGGTAGACGATCAAAGAAAATCGCTTATATTGCCTCTTTCTG  
TCCCGCCGGTCCGTCCCGTGAAGTCCCGTGCAGGTCACCCCTACTCTCCATCTGCTAGTTTTCTTTTAGCGAATATAACGGAGAAAGAC

24,225

KIF5A

KIF5A-202

KIF5A-202

GTTTTAAAAGGGATAAATGCTTATGCTTGAAATGTGGAAACATCAATATAAATGTATGTAAGAAAATTTAAAATCATCCACTATTC  
CAAAATTTTCCCTATTTACGAATACGAACTTTACACCTTTGTAGTTATATTTACATACATTCTTTTAATTTTAGTAGGTGATAAG

24,310

KIF5A

KIF5A-202

KIF5A-202

AGAGATAACACTCAACATTTTGTCTTTCTCTGTGCATATACCATGCAATTGAGTTATACTGTATAAGTAATTTTTTTTTTTGAGA  
TCTCTATTGTGAGTTGTA AAAACGAAAAGAGACACGTATATGGTACGTTAACTCAATATGACATATTCATTA AAAAAAAAAAACTCT

24,395

KIF5A

KIF5A-202

KIF5A-202

CAGGGTCTTGCTGTGTCGCCCAGGCTAGAGTGCAGAGGCACGATTGTGGTTCCTGCAACCTCTGCCTCTCGGGTTCAAGTGATT  
GTCCCAGAACGACACAGCGGGTCCGATCTCACGTCTCCGTGCTAACACCAAGTGACGTTGGAGACGGAGAGCCCAAGTTCCTAA

24,480

KIF5A

KIF5A-202

KIF5A-202

CTCCTGCCTCAGCCTCCAGAGTAGCTGGGATTACAGGCGCATGCCACCACGCCTGGCTAATTTTTGTATTTTTGGTAGAAACGGG  
GAGGACGGAGTCGGAGGTCTCATCGACCCTAATGTCCGCGTACGGTGGTGC GGACCGATTAAAAACATAAAAAACCATCTTTGCC

24,565

KIF5A

KIF5A-202

KIF5A-202

GTTTCACCATGTTGGCTAGGCTGACCTCTGGCGATCCGCCCGCCTCGGCCCCCTGAAAGTGCTTGGATTACAGGCGTGAGCCACCG  
CAAAGTGGTACAACCGATCCGACTGGAGACCGCTAGGCGGGCGGAGCCGGGGGACTTCACGAACCTAATGTCCGCACTCGGTGGC

24,650

KIF5A

KIF5A-202

KIF5A-202

TGCCCGGCCTGTATATGTAATTATACATCTGATTTTTTTTCATTCAGCATTATATTATGCACAATTTCTACTTCATTAATAATTC  
ACGGGCGGACATATACATTAATATGTAGACTAAAAAAGTAAGTCGTAATATAATACGTGTTAAAGGATGAAGTAATTATTAAG

24,735

KIF5A

KIF5A-202

KIF5A-202

TTCATAAAAGTATTTTTATTTTCATTTATTATTATTTTTGCTTTGAGAGAAAGAGTCTTGCTTTGTTACTCGGGCTGAAGTGC  
AAGTATTTTCATAAAAATAAAAAGTAAATAATAATAATAAAAACGAAACTCTTTTCTCAGAACGAAACAATGAGCCCGACTTCACG

24,820

KIF5A

KIF5A-202

KIF5A-202



AGTGGTGCAGTAATAGCTCACTGCAACCTCAAACCTCCTGGGCTCGAGGGATCCCCCAACCTCAGCCTCTGAAAGAGCTGGGAC  
TCACCACGTCAATTATCGAGTGACGTTGGAGTTTGGAGACCCGAGCTCCCTAGGGGGGGTTGGAGTCGGAGACTTTCTCGACCTG

24,905

KIF5A

KIF5A-202

KIF5A-202

TACAGGTGCACACCACCACGCCAGCTAATTTTTTTTTTTTTTTTTTTTTTTGGTAGAGTTGGAGTCTCACTTTGTTGCCAGGCTG  
ATGTCCACGTGTGGTGGTGCGGGTCGATTAATAAAAAAAAAAAAAAAAAAACCATCTCAACCTCAGAGTGAAACAACGGGTCCGAC

24,990

KIF5A

KIF5A-202

KIF5A-202

GTCTCAAACCTCCTGGCCTCAAGCGATCCTCCCGCCTTGGCCTTTCAATGCGCTGGGATTAAGGCATGCACCACCAGGCTAGCTA  
CAGAGTTTGGAGACCGGAGTTCGCTAGGAGGGCGGAACCGGAAAGTTACGCGACCCCTAATTTCCGTACGTGGTGGTCCGATCGAT

25,075

KIF5A

KIF5A-202

KIF5A-202

ATATTTTAAATTTTTTGTAGAGACAGGGTCTCACTATGTTGCCAGGTTGGCCTTGAACCTCCTGGCTTCAACCGATCTTCCTGTA  
TATAAAATTTAAAAACATCTCTGTCCAGAGTGATACAACGGGTCCAACCGGAACCTTGAGGACCGAAGTTGGCTAGAAGGACAT

25,160

KIF5A

KIF5A-202

KIF5A-202

GGATATGGGGTTTCTAACTCAAAGCTTATACTATCTGGATTTTTATCAGGATCCTGCCTCTACCCCAAACCTTCTTACGTCTAAA  
CCTATACCCCAAAGATTGAGTTTTCGAATATGATAGACCTAAAAATAGTCCTAGGACGGAGATGGGGGTTTGAAGAATGCAGATTT

25,245

KIF5A

KIF5A-202

KIF5A-202

CTGGAAGGAGTAGCTTCCCTTCACCTGTCTTTCCCTGTTGCCTCCAACAGGATGATGAAATCAACCAACAAAGCCAACCTCATAGA  
GACCTTCCCTCATCGAAGGGAAGTGGACAGAAAGGGACAACGGAGGTTGTCTACTACTTTAGTTGGTTGTTTCGGTTGAGTATCT

25,330

KIF5A

KIF5A-202

KIF5A-202

D D E I N Q Q S Q L I E  
ENSE00001140452

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25,415

KIF5A

KIF5A-202

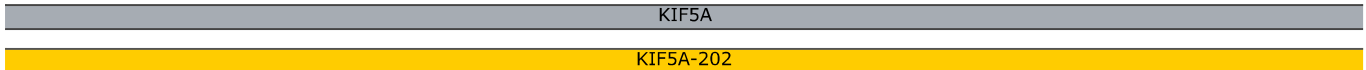
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K L K Q Q M L D Q E E  
ENSE00001140452

KIF5A-202

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25,500

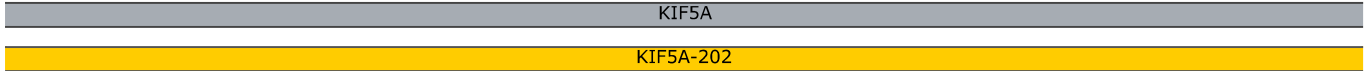


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KIF5A-202

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25,585

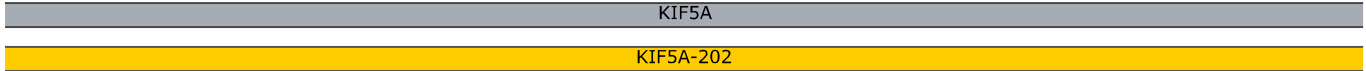


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KIF5A-202

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25,670

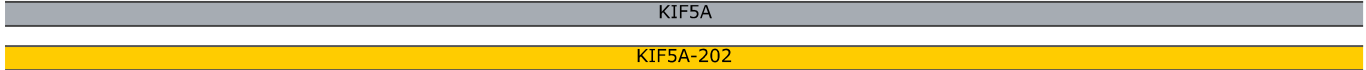


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KIF5A-202

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25,755

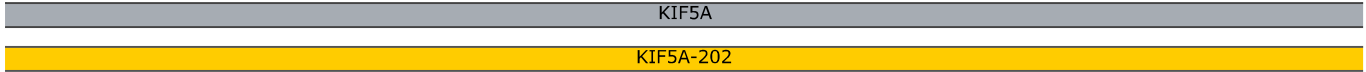


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KIF5A-202

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25,840

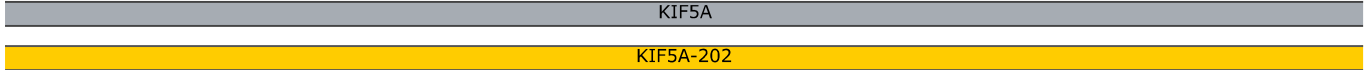


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KIF5A-202

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25,925

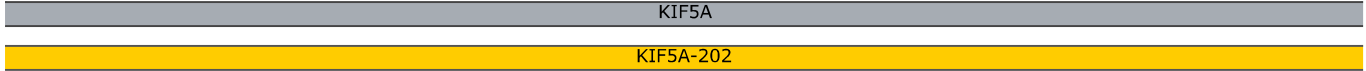


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KIF5A-202

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26,010



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KIF5A-202

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26,095

KIF5A

KIF5A-202

455 460 465 470  
L L V S T R G D N E K V Q R E L S H L Q

ENSE00001140444

KIF5A-202

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26,180

KIF5A

KIF5A-202

475 480 485 490 495 500  
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ENSE00001140444

KIF5A-202

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26,265

KIF5A

KIF5A-202

505 510 515 520  
Q E V E E K S Q Q N Q L L V D E L S Q K V

ENSE00001140444

KIF5A-202

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26,350

KIF5A

KIF5A-202

KIF5A-202

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26,435

KIF5A

KIF5A-202

KIF5A-202

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26,520

KIF5A

KIF5A-202

KIF5A-202

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26,605

KIF5A

KIF5A-202

525 530 535 540  
A T M L S L E S E L Q R L Q E V S

ENSE00001140437

KIF5A-202

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26,690

KIF5A

KIF5A-202

G H Q R K R I A E V L N G L M K D L S E F S V I V G N G

ENSE00001140437

KIF5A-202

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26,775

KIF5A

KIF5A-202

E I K L

ENSE00001140...

KIF5A-202

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26,860

KIF5A

KIF5A-202

KIF5A-202

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26,945

KIF5A

KIF5A-202

KIF5A-202

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27,030

KIF5A

KIF5A-202

KIF5A-202

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27,115

KIF5A

KIF5A-202

KIF5A-202

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27,200

KIF5A

KIF5A-202

KIF5A-202

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27,285

KIF5A

KIF5A-202

KIF5A-202

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27,370

KIF5A

KIF5A-202

KIF5A-202

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27,455

KIF5A

KIF5A-202

KIF5A-202

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27,540

KIF5A

KIF5A-202

KIF5A-202

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27,625

KIF5A

KIF5A-202

KIF5A-202

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27,710

KIF5A

KIF5A-202

KIF5A-202

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27,795

KIF5A

KIF5A-202

KIF5A-202

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27,880

KIF5A

KIF5A-202

KIF5A-202

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27,965

KIF5A

KIF5A-202

KIF5A-202

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28,050

KIF5A

KIF5A-202

KIF5A-202

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28,135

KIF5A

KIF5A-202

KIF5A-202

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28,220

KIF5A

KIF5A-202

KIF5A-202

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28,305

KIF5A

KIF5A-202

KIF5A-202

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28,390

KIF5A

KIF5A-202

KIF5A-202

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28,475

KIF5A

KIF5A-202

KIF5A-202

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28,560

KIF5A

KIF5A-202

KIF5A-202

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28,645

KIF5A

KIF5A-202

KIF5A-202

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28,730

KIF5A

KIF5A-202

KIF5A-202

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28,815

KIF5A

KIF5A-202

KIF5A-202

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28,900

KIF5A

KIF5A-202

KIF5A-202

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28,985

KIF5A

KIF5A-202

KIF5A-202

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29,070

KIF5A

KIF5A-202

575  
P V E I  
ENSE00001108584

KIF5A-202

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29,155

KIF5A

KIF5A-202

S G A I E E E F T V A R L Y I S K I S E V K S V V K R

580 585 590 595 600  
ENSE00001108584

KIF5A-202

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29,240

KIF5A

KIF5A-202

C R Q L E N L Q V E C H R K M E V T G R E L S S C Q L L I

605 610 615 620 625 630  
ENSE00001108584

KIF5A-202

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29,325

KIF5A

KIF5A-202

635  
S Q  
ENSE000...

KIF5A-202

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29,410

KIF5A

KIF5A-202

KIF5A-202

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29,495

KIF5A

KIF5A-202

KIF5A-202

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29,580

KIF5A

KIF5A-202

KIF5A-202



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29,665

KIF5A

KIF5A-202

H E A K I R S L T E Y M Q S V E L  
ENSE00001108582

KIF5A-202

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29,750

KIF5A

KIF5A-202

K K R H L E E S Y D S L S D E L A K L Q A Q  
ENSE00001108582

KIF5A-202

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29,835

KIF5A

KIF5A-202

KIF5A-202

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29,920

KIF5A

KIF5A-202

KIF5A-202

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30,005

KIF5A

KIF5A-202

KIF5A-202

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30,090

KIF5A

KIF5A-202

E T V H E V A L K D  
ENSE00001108593

KIF5A-202

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30,175

KIF5A

KIF5A-202

K E P D T Q D A D E V K  
ENSE00001108593

KIF5A-202

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30,260

KIF5A

KIF5A-202

700  
K A L E L Q  
ENSE00001108592

KIF5A-202

GATGGAGAGTCACCGGGAGGCCCATCACCGGCAGCTGGCCCCGGCTCCGGGACGAGATCAACGAGAAGCAGAAGACCATTGATGAG  
CTACCTCTCAGTGGCCCTCCGGGTAGTGGCCGTCGACCGGGCCGAGGCCCTGCTCTAGTTGCTCTTCGCTTCTTGGTAACCTACTC

30,345

KIF5A

KIF5A-202

705 710 715 720 725 730  
M E S H R E A H H R Q L A R L R D E I N E K Q K T I D E

ENSE00001108592

KIF5A-202

CTCAAAGAGTAAGGGTTCCCAAGGGCGACTCCAGCCCCTCCCGGGTCTGTACCTTGTGCTGATTGACTCACATGTCCCCTCTGG  
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30,430

KIF5A

KIF5A-202

L K D  
ENSE0000...

KIF5A-202

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30,515

KIF5A

KIF5A-202

KIF5A-202

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30,600

KIF5A

KIF5A-202

KIF5A-202

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30,685

KIF5A

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KIF5A-202

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30,770

KIF5A

KIF5A-202

735 740  
L N Q K L Q L E L E K  
ENSE00001108590

KIF5A-202

TTCAGGCTGACTACGAGAAGCTGAAGAGCGAAGAACACGAGAAGAGCACCAAGCTGCAGGAGCTGACGTGAGTGGCATGGATTTA  
AAGTCCGACTGATGCTCTTCGACTTCTCGCTTCTTGTGCTCTTCTCGTGGTTTCGACGTCCTCGACTGCACTCACCGTACCTAAAT

30,855

KIF5A

KIF5A-202

745                    750                    755                    760                    765  
L   Q   A   D   Y   E   K   L   K   S   E   E   H   E   K   S   T   K   L   Q   E   L   T

ENSE00001108590

KIF5A-202

CCTGTAAAACCTACAGCCTTGTAGGCTCAGAACTGTGAACTCAGACACGCTTGCAGAGGCAGGACACACATGCAGACATGATAGGG  
GGACATTTTGTATGTCGGAACATCCGAGTCTTGACACTTGAGTCTGTGCGAACGTCTCCGTCCTGTGTGTACGTCTGTACTATCCC

30,940

KIF5A

KIF5A-202

KIF5A-202

TGACTCATGGGAAAAATATGATGGGGTAGGGACGGGACCAAAAGGACACTCTCAGCAAAGACTGCCGTTGAGTATTCACCAGTAT  
ACTGAGTACCCTTTTTATACTACCCCATCCCTGCCCTGGTTTTCTGTGAGAGTCGTTTTCTGACGGCAACTCATAAGTGGTCATA

31,025

KIF5A

KIF5A-202

KIF5A-202

GGAAGGAGGTTTACGTGTTCTATTCAGTGTAAAAACAGGTTACAAAACCATATGCATGGTATGATCCCATAAAAATGTATACATG  
CCTTCTCCAAATGCACAAGATAAGTCACATTTTTGTCCAATGTTTTGGTATACGTACCATACTAGGGTATTTTTACATATGTAC

31,110

KIF5A

KIF5A-202

KIF5A-202

GATATGTAGGCATAGAAAAAGTCTAGAAAAGGTGGACACCAGAAGGTTAATGTTGGTTTTGATCTGTAAATAGTAGAATCATAGGC  
CTATACATCCGTATCTTTTTTCAGATCTTCCACCTGTGGTCTTCCAATTACAACCAAACTAGACATTTATCATCTTAGTATCCG

31,195

KIF5A

KIF5A-202

KIF5A-202

TTTTTATAAAAACCTCACCTTATGTCTCTCTTTAAAATTCTTTTCTAATTTTTGCACAGTAAACATGAGTAACTTGTGTAATAAAT  
AAAAATATTTTTGAGTGGAATACAGAGAGAAATTTAAGAAAAGATTAAAAACGTGTCATTTGTACTCATTGAACACATTATTTA

31,280

KIF5A

KIF5A-202

KIF5A-202

AATAATAGGCTGGGTGCGATGGCTTACACCTATAATCTCAGCACTTTGGGAGGCCAAAGCAGGTGGACTGCTTGAGCTCAGTAGT  
TTATTATCCGACCCACGCTACCGAATGTGGATATTAGAGTCGTGAAACCTCCGGTTTTCGTCCACCTGACGAACTCGAGTCATCA

31,365

KIF5A

KIF5A-202

KIF5A-202

TCGAGACCAGCCTGGGCAACATGGCAAAACCCCTGTCTCTACTAAAAATACAAAAATTAGCTGGGCATGGTGGCATACTGTCTGTGG  
AGCTCTGGTTCGGACCCGTTGTACCGTTTTGGGACAGAGATGATTTTTATGTTTTTAATCGACCCGTACCACCGTATGCAGACACC

31,450

KIF5A

KIF5A-202

KIF5A-202

TCCCAGATGCTTGGGAGGCTGAGGTGGGAAGGATCCCTTGAGCCCAGGAGGTTGAGGCTGCAGTGAGCCCTGATTGTGCCACTGT  
AGGGTCTACGAACCCTCCGACTCCACCCTTCCCTAGGGAACCTCGGGTCTCCAACTCCGACGTCCTCGGGACTAACACGGTGACA

31,535

KIF5A

KIF5A-202

KIF5A-202

ACTCTATCTAGCCTAGGTAACAGAATGAGACCCTGTTTCACAAAATAACAATAATAGTAATACTTAAATGGAGATAAAAAGTAATA  
TGAGATAGATCGGATCCATTGTCTTACTCTGGGACAAAGTGTTTTATTGTTATTATCATTATGAATTTACCTCTATTTTTATTAT

31,620

KIF5A

KIF5A-202

KIF5A-202

GAGGAAGAGGCAGGAGGAAGGAGAGTCCTGAGGGATCTTTCATTTCCCTTATTTCTCTTGCTACAGATTTCTGTACGAGCGACA  
CTCCTTCTCCGTCCTCCTTCTCCTCAGGACTCCCTAGAAAGGTAAAGGGAATAAAGAGAACGATGTCTAAAGACATGCTCGCTGT

31,705

KIF5A

KIF5A-202

770  
F L Y E R H  
ENSE00001108597

KIF5A-202

TGAGCAGTCCAAGCAGGACCTCAAGGGTCTGGAGGAGACAGTTGTGAGTGGTTCCCTTCTGTGCCAAATTCACAGGACTGGGGAG  
ACTCGTCAGGTTTCGTCTGGAGTTCCCAGACCTCCTCTGTCAACACTCACCAAGGGAAGACACGGTTTAAAGTGTCTGACCCCTC

31,790

KIF5A

KIF5A-202

775 780 785  
E Q S K Q D L K G L E T V  
ENSE00001108597

KIF5A-202

TGGGGAGGCTTCATTTCTTCCCTAACCCATTCCCTCCTGCCCTTTTGCAGCCATTCTGTAGCGTAATCAAGACACATTTTTTCCCTA  
ACCCCTCCGAAGTAAAGAAGGATTGGGATAAGGAGGACGGGAAAACGTCGGTAAGACATCGCATTAGTTCTGTGTAAAAAAGGAT

31,875

KIF5A

KIF5A-202

KIF5A-202

AAGGATAAGTGACTCACTTGATTATAGAGACTGGAGGTACCTATAATTCTGGAGGAATAGGACAGACCTGGTATCTGGCTATTCC  
TTCCCTATTCACTGAGTGAACATAATATCTCTGACCTCCATGGATATTAAGACCTCCTTATCTCTGTCTGGACCATAGACCGATAAGG

31,960

KIF5A

KIF5A-202

KIF5A-202

CAATTTTTTCATCATTCTTTCCAGGCCCGGGAAGCTCCAGACCCCTCCACAACCTTCGCAAGCTGTTTCGTTCAAGACGTCACGACTCG  
GTTAAAAAGTAGTAAGAAAGGTCCGGGCCCTTGAGGTCTGGGAGGTGTTGGAAGCGTTCGACAAGCAAGTTCTGCAGTGCTGAGC

32,045

KIF5A

KIF5A-202

A R E L Q T L H N L R K L F V Q D V T T R

ENSE00001108600

KIF5A-202

AGTCAAGAAAGTGAGTGCTGTCTTGGGGTTTTGTGTCAGCCCCCACATCCTCCTCCTATCCTTAGGTTTTCTCCTGCCCTGTTGCC  
TCAGTTCTTTCACTCACGACAGGAACCCCAAACAGTCGGGGGTGTAGGAGGAGGATAGGAATCCAAAGAGGACGGGGACAACGG

32,130

KIF5A

KIF5A-202

810

V K K

ENSE0000110...

KIF5A-202

CCTATGGGGCTGGCTTGGCCTGGTCTTGGTGGGACCTGTTTGGCCTCAGGACAGCCACGTCTTTCCTTCTATCTGTTCTCAGAGT  
GGATACCCCGACCGAACC GGACCAGAACCACCCTGGACAAACCGGAGTCCTGTGCGGTGCAGAAAGGAAGATAGACAAGAGTCTCA

32,215

KIF5A

KIF5A-202

S

KIF5A-202

GCAGAAATGGAGCCCCGAAGACAGTGGGGGGATTCACTCCCAAAGCAGAAGATTTCTTTCTTGAGAACAACCTGGAACAGCTTA  
CGTCTTTACCTCGGGCTTCTGTCAACCCCTAAGTGAGGGTTTTCTGTCCTTCTAAAGGAAAGAACTCTTGTTGGACCTTGTGCAAT

32,300

KIF5A

KIF5A-202

815

820

825

830

835

840

A E M E P E D S G G I H S Q K Q K I S F L E N N L E Q L

ENSE00001108599

KIF5A-202

CAAAGGTTACAAACAGGTAAGAGTCTGCTGAAGGAGTGAAGAGAATTTTTGAGGCCGGGTAGCTAGCATACCAAATCCTCAGAG  
GTTTCCAAGTGTGTTGTCATTCTCAGACGACTTCTCACTTCTCTTAAAAACTCCGGCCCATCGATCGTATGGTTTAGGAGTCTC

32,385

KIF5A

KIF5A-202

845

T K V H K Q

ENSE00001108599

KIF5A-202

GCCCTTGGATTACAGAAAATCTAGTTGCATGTTTTCTTACTGTTTCGCTTTTACTTTCCCTACTAATCCCTTCTTTATACCATA  
CGGGGAACCTAAGTCTTTTAGATCAACGTACAAAAGGAATGACAAGCGAAAATGAAAGGGATGATTAGGGAAGAAAATATGGTAT

32,470

KIF5A

KIF5A-202

KIF5A-202

TTTGGTCCACTTGTACCTTGTCTTTGTTTCATGCCTGTATTCCCTTCTCAAAGTTTCTAACCACCTCTGCTCAAAGTGGAAAT  
AAACCAGGTGAACATGGAACAAGAAACAAAGTACGGACATAAGGGAAGAGTTTCAAAGATTGGGTGGAGACGAGTTTACCTTAA

32,555

KIF5A

KIF5A-202

KIF5A-202

CCCCAGGCCTACCTTGGAGGGGAGAGGTTGAAACTAACAGAGGCATGGGCTGTAACCTATACAGGAGGGGAGACTGGTCAGACGTTAC  
GGGGTCCGGATGGAACCTCCCTCTCCAACCTTTGATTGTCTCCGTACCCGACATTGATATGTCTCCCTCTGACCAGTCTGCAATG

32,640

KIF5A

KIF5A-202

KIF5A-202

CCAGAGATGGAAGGCAGGGAGATGAGAAGAAGCAAGGGAGTTGGGCTTCTTTTCGTGGAGAGAACTCCATCTGTCTAGGTCTGTGG  
GGTCTCTACCTTCCGTCCCTCTACTCTTCTTCGTTCCCTCAACCCGAAGAAAGCACCTCTCTTGAGGGTAGACAGATCCAGACACC

32,725

KIF5A

KIF5A-202

KIF5A-202

CAGGCATGCAGGGACATTAATGATGTCCCTGGCTAGGCACAGTGGTGCATGCCTGTAGTCCCAGCGCTTCAGGAAGCCGAGGCG  
GTCCGTACGTCCCTGTAATTTACTACAGGGACCGATCCGTGTCACCACGTACGGACATCAGGGTCGCGAAGTCCTTCGGCTCCGC

32,810

KIF5A

KIF5A-202

KIF5A-202

GGCGGATCACTTGAGCACAGGAGTTCAAGACCAGCCTAAGCAACATGGCGAAACCCCATCTCTACAAAAAATACAAAAATTAGCC  
CCGCCTAGTGAACCTCGTGTCTCAAGTTCTGGTCGGATTCTGTTGTACCGCTTTGGGGTAGAGATGTTTTTTATGTTTTTAATCGG

32,895

KIF5A

KIF5A-202

KIF5A-202

GGATGTGGTGGCACACACCCATAGTCCAGCTACTTGGGAGGCTGAGGTAGGGCAATTGCTTGAGCGCAGGAAGTAGAGGCTGCA  
CCTACACCACCGTGTGTGGGTATCAGGGTCGATGAACCCTCCGACTCCATCCCCTTAACGAACTCGCGTCTTTCATCTCCGACGT

32,980

KIF5A

KIF5A-202

KIF5A-202

GTGAGCTGTGATCATGCCACTGCACTCCAGCCTAGGTGACAGAGTGAGACCCTGTTTCAATTAATAAAAAAATGATGTCCCTAAGA  
CACTCGACACTAGTACGGTGACGTGAGGTCGGATCCACTGTCTCACTCTGGGACAAAAGTTAATTTTTTTTTACTACAGGGATTCT

33,065

KIF5A

KIF5A-202

KIF5A-202

TGGCCCAACCAGCCCCTGGTTGGGGCCCCAGTCAAACCTCCTGTGTATTAAGTTGCTGCCTCTCTGTCCCCCTCCTTGCTGTTGC  
ACCGGTTGGTCGGGGACCAACCCCGGGGTCAGTTTTGAGGACACATAATTCAACGACGGAGAGACAGGGGGAGGAACGACAACG

33,150

KIF5A

KIF5A-202

KIF5A-202

GGTTCTTTAGGTGGATGACTGGGTTTCAAAGGTATGGGCTGGGGATGCAGAAGGGCAGTCCAAAGGAGTCAGGACAGGAAATGTT  
CCAAGAAATCCACCTACTGACCCAAAGTTTCCATACCCGACCCCTACGTCCTCCCGTCAGGTTTCTCAGTCTGTCTTTTACAA

33,235

KIF5A

KIF5A-202

KIF5A-202

TGGTGCATGCTGGGTAGGGGCACTCTCACTAGCACTAAATATCTGAGCCTTGAAGACAGGCTCGGCAGGCTGTCAACTGGTCCTT  
ACCACGTACGACCCATCCCCGTGAGAGTGATCGTGATTTATAGACTCGGAACTTCTGTCCGAGCCGTCCGACAGTTGACCAGGAA

33,320

KIF5A

KIF5A-202

KIF5A-202

TTAACTAATTCATAAAATAAACCCCTAACCTATACTTCATTCCCTTTCTTTCAAATCTACCTTAAGATTCCATTTAAACTTACATT  
AATTGATTAAGTATTTTATTTGGGATTGGATATGAAGTAAGGAAAGGAAAGTTTAGATGGAATTCTAAGGTAAATTTGAATGTAA

33,405

KIF5A

KIF5A-202

KIF5A-202

CTCACTAGCCTAGCACTTAAACTTCTTTTCTCCAGTATAATGCCAGCTTATATAGTAAATATTCAGTACTTTTTTTTTTCTT  
GAGTGATCGGATCGTGAATTTGAAGAAAAGGAGGGTCATATTACGGGTCGAATATATCATTATAAGTCATGAAAAAAAAAAGAA

33,490

KIF5A

KIF5A-202

KIF5A-202

AATGAATCCTAAACCTGTGCCAGTGATAATGTACAGAGTTTATTTATCTTATTTAGGCCTGCAGAGGGCTTTGCTACGATTTTA  
TTACTTAGGATTTGGACACGGGTCACTATTACATGTCTCAAATAAATAGAATAAATCCGGACGTCTCCCAGAACGATGCTAAAAT

33,575

KIF5A

KIF5A-202

KIF5A-202

TTTCCTTTATTATGAACTGAGTAACAAAATTATAGAAAAGTTGAAAGGCAGATAGGAAACATTTGAAATCAATTCTGCCATTTCG  
AAAGGAAATAATACTTTGACTCATTGTTTTAATATCTTTCAACTTCCGTCTATCCTTTGTAACCTTTAGTTAAGACGGTAAGC

33,660

KIF5A

KIF5A-202

KIF5A-202

ATTTTCATTCCCGCATTCACTTTCCCTCTCTGTCCAAATCCATATTATGTTGCTTAGAACACACACACACATGTGTGTGCTACTC  
TAAAAGTAAGGGCGTAAGTGAAAGGGAGAGACAGGTTTAGGTATAATACAACGAATCTTGTGTGTGTGTGTACACACACGATGAG

33,745

KIF5A

KIF5A-202

KIF5A-202

TGGGCCTCTCTGCCTATGGGAAAAGCCCTGCTCTATGGAGCAAGCCCCAGAAAAATTTCCATGAAAAAACACAACCACACTGTT  
ACCCGGAGAGACGGATACCCTTTTCGGGACGAGATACCTCGTTTCGGGGTCTTTTTAAAGGTACTTTTTTGTGTTGGTGTGTGACAA

33,830

KIF5A

KIF5A-202

KIF5A-202

TCCTTTATCGTCACTGAAGCCTCTGCCTCTGTTCAAAGTCCCAAAAAACAAAAATGACTCACCTATAGGATAAATAGAGGACTC  
AGGAAATAGCAGTGACTTCGGAGACGGAGACAAGTTTCAGGGTTTTTTTTGTTTTTACTGAGTGGATATCCTATTTATCTCCTGAG

33,915

KIF5A

KIF5A-202

KIF5A-202

ACTACAATTTCTACCTCAGCAGACACAAGAGTAAAAAGGAAAAGGAGATAAAAACTTCTCAGTTAAGAGAATCTTAACAGCCAG  
TGATGTTAAAGGATGGAGTCGTCTGTGTTCTCATTTTTCTTTTTCTCTATTTTTGAAGAGTCAATTCTCTTAGAATTGTCGGTC

34,000

KIF5A

KIF5A-202

KIF5A-202

GACTATAGCCCTATATCAATTAAGCTAAAGTATTGTCACAGCAAAACATTGCTTATACTCCATAAATTGTCCAAATGGAAACTGC  
CTGATATCGGGATATAGTTAATTCGATTTCAATACAGTGTCTTTTTGTAACGAATATGAGGTATTTAACAGGTTTACCTTTGACG

34,085

KIF5A

KIF5A-202

KIF5A-202

ATGGAAGGGTTTCTAGCTTGTCCCTTGAGCCCCAGTGTTCCTCCGCTATGCTGATTTACCCGCTGTCTTCCAAGGCCCTGCTCC  
TACCTTCCCAAAGATCGAACAGGGGAACTCGGGGGTCAACAAGGGGCGATACGACTAAATGGGCGACAGAAGGTTCCGGGACGAGG

34,170

KIF5A

KIF5A-202

KIF5A-202

TTTTGCAACCTATAGTGCCCCAGTCATTGTGTGGAACCTGTAAAAAGATCAGGAAGTCTTTTTCGGGCTGCAGGGTGGTTGCTCC  
AAAACGTTGGATATCACGGGGTCAAGTAACACACCTTGGACATTTTTCTAGTCCTTCAGAAAAGCCCGACGTCCCACCAACGAGG

34,255

KIF5A

KIF5A-202

KIF5A-202

CATGCTCTAGCTTAATTTCACTGGGGGAGGGATAACCCAGGAAGTCCTTGAATGTGAAGGTAATGAGTGCAAATGTTTGTGAGAC  
GTACGAGATCGAATTAAGTGACCCCTCCCTATTGGGTCTTCAGGAACCTTACACTTCCATTACTCACGTTTACAAACACTCTG

34,340

KIF5A

KIF5A-202

KIF5A-202



CTCAAACATTTTCTTTCTTCTCCTACGGGGCGGGCTCTGCCTGTCTATATGTGTATGTCAGGGGCTCCTGAATTCAGCTTCTGCT  
GAGTTTGTAAAAGAAAGGAAGGATGCCCGGCCCGAGACGGACAGATATACACATACAGTCCCCGAGGACTTAAGGTCGAAGACGA

34,425

KIF5A

KIF5A-202

KIF5A-202

CCTGCTCTGCACTGCACCTGCCATGCACAGATTCTCCTCAATGCCACAGCCACCAAAGTCTACTGTGCCCTTGTGCCCCACCC  
GGACGAGACGTGACGTGGACGGTACGTGTCTAAGAGGAGTTACGGTGTGGTGGTTTACGATGACACGGGAACGACGGGGTGGG

34,510

KIF5A

KIF5A-202

KIF5A-202

TTTGCATGCCACAAAGCCCTCTCTGGGGAAGCGGGTCCCTCATCCCCATGGCCGCCCTGGGGCTATTGATCTGGCACATGCTGG  
AAACGTACGGGTGTTTCGGGAGAGACCCCTTCGCCAGGGAGTAGGGGTACCGGCGGGACCCCGATAACTAGACCGTGTACGACC

34,595

KIF5A

KIF5A-202

KIF5A-202

GAGATGTGGGGGAAACCAGATGGAGACAGGACAAGGCGCTCTCACAAGAGTTCTGGGCTGCAGTGGAGATGGCAGGTTTTACTGC  
CTCTACACCCCTTTGGTCTACCTCTGTCTTCCGCGAGAGTGTCTCAAGACCCGACGTCACCTCTACCGTCCAAAATGACG

34,680

KIF5A

KIF5A-202

KIF5A-202

CTAGAAAATTATATAACTTTTAAATGCCTGACCACCCACCCCTTCGCTCTGGGAGAAGGAATGAGCTGGACAGAACAGTCCATTAC  
GATCTTTTAAATATATTGAAAATTTACGGACTGGTGGGTGGGAAGCGAGACCCCTCTTCCTTACTCGACCTGTCTTGTGAGGTAATG

34,765

KIF5A

KIF5A-202

KIF5A-202

ATAAAGGCAATGAGGCCTTTTGAGGAAATGACATGGTCTCCATCTTCTCTGACTCCTGATTTTTCTTTATTCTCTCTCCTCACCC  
TATTTCCGTTACTCCGGAAAACCTCTTTACTGTACCAGAGGTAGAAGAGACTGAGGACTAAAAAGAAATAAGAGAGAGGAGTGGG

34,850

KIF5A

KIF5A-202

KIF5A-202

CTGTCCCCTACGCTCCTCTGGGTGACCGTCTTGGGTCACCTTGCCTTCCTTTCCACTTCTTCCTTTGGCTTGCCCCATAGCTGGT  
GACAGGGGATGCGAGGAGACCCACTGGCAGAACCAGTGAACGGAAGGAAAGGTGAAGAAGGGAAACCGAACGGGGTATCGACCA

34,935

KIF5A

KIF5A-202

L V  
ENSE...

KIF5A-202

ACGTGACAATGCAGATCTGCGTTGTGAGCTTCTCTAAATTGGAAAAACGACTTAGGGCTACGGCTGAGAGAGTTAAGGCCCTGGAG  
TGCAGTGTACGTCTAGACGCAACTCGAAGGATTTAACCTTTTTGCTGAATCCCGATGCCGACTCTCTCAATTCCGGGACCTC

35,020

KIF5A

KIF5A-202

850 855 860 865 870 875  
R D N A D L R C E L P K L E K R L R A T A E R V K A L E

ENSE00001108598

KIF5A-202

GGTGCAGTGAAGGAGGCCAAGGAGGGCGCCATGAAGGACAAGCGCCGGTACCAGCAGGAGGTGGACCGCATCAAGGAGGCCGTTCC  
CCACGTGACTTCTCCGGTTCTCCCGCGGTTACTTCTGTTTCGCGGCCATGGTTCGTCCTCCACCTGGCGTAGTTCTCCGGCAAG

35,105

KIF5A

KIF5A-202

880 885 890 895 900  
G A L K E A K E G A M K D K R R Y Q Q E V D R I K E A V

ENSE00001108598

KIF5A-202

GCTACAAGAGCTCGGGCAAACGGGGCCATTCTGCCAGATTGGTGAGTAGGTGTTAGCAGGCAAGGTGGGAGTATCTCCTGAAGC  
CGATGTTCTCGAGCCCGTTTGCCCCGGTAAGACGGGTCTAACCACCTCATCCACAATCGTCCGTTCCACCCTCATAGAGGACTTCG

35,190

KIF5A

KIF5A-202

905 910 915  
R Y K S S G K R G H S A Q I

ENSE00001108598

KIF5A-202

AAATTTAGCAAATTGCTAATTGCCAAGCAACTAGATTATTGCTTCTTACCTACCCCTAGCCTCATCCCCTTCCCCCAAAAAGT  
TTTAAATCGTTTAAACGATTAACGGTTTCGTTGATCTAATAACGAAGAATGGATGGGGATCGGAGTAGGGTGAAGGGGGTTTTTCA

35,275

KIF5A

KIF5A-202

KIF5A-202

AAAAAAGTGATTATGTTACAAGCAACTCAGTTCAACCCAGCTAAATGACCTCAGGGACCAGGGCAAATGCAGGGTCATAGCCTC  
TTTTTTCAC TAATAACAATGTTTCGTTGAGTCAAGTTGGGGTCGATTTACTGGAGTCCCTGGTCCCGTTTACGTCCCAGTATCGGAG

35,360

KIF5A

KIF5A-202

KIF5A-202

CTCATGGTTGTTTTCTTTCTTTATTGCAAGCAAACCCGTCGGCCCTGGCCACTACCCAGCATCCTCACCCACCAACCCCTATGGC  
GAGTACCAACAAAAGAAAGAAATAACGTCGGTTTGGGCAGGCCGGACCGGTGATGGGTCTGAGGAGTGGGTGGTTGGGGATACCG

35,445

KIF5A

KIF5A-202

920 925 930 935  
A K P V R P G H Y P A S S P T N P Y G

ENSE00001108603

KIF5A-202

ACCCGGAGCCCTGAGTGCATCAGTTACACCAACAGCCTCTTCCAGAACTACCAGAATCTCTACCTGCAGGCCACACCCAGCTCCA  
TGGGCCTCGGGACTCACGTAGTCAATGTGGTTGTTCGGAGAAGGTCTTGATGGTCTTAGAGATGGACGTCCGGTGTGGGTTCGAGGT

35,530

KIF5A

KIF5A-202

940 945 950 955 960 965  
T R S P E C I S Y T N S L F Q N Y Q N L Y L Q A T P S S

ENSE00001108603

KIF5A-202

CCTCAGATATGTTAGTGGAGTGACCACACGTGTGGGTTGGAGTCCCACCCAAAGCTCCCTGGACCCTAGAAGGCATAGGGTGGGGGC  
GGAGTCTATACATCACTCACTGGTGTGCACACCCAAACCTCAGGGTGGGTTTCGAGGGACCTGGGATCTTCCGTATCCCACCCCCG

35,615

KIF5A

KIF5A-202

970  
T S D M Y  
ENSE00001108603

KIF5A-202

AGTTATTGGTTGTGGCTTAATTATTTTCTAAACCCTTTCTCAACTTCATGCCTATGATTAGAAGGTAGGTGTCTGCCCTCCAG  
TCAATAACCAACACCGAATTAATAAAAGGATTTGGGAAAGAGTTGAAGTACGGATACTAATCTTCCATCCACAGACGGGAGGGTC

35,700

KIF5A

KIF5A-202

KIF5A-202

CCTGTGGCCATGTTTGTTCCTCTGCTCTCTGGGGATGGGGAGGGCTGAGCAGCTCTATCACTGAGGATGAGTGTGGATTAGTG  
GGACACCGGTACAAACAAAAGGAGACGAGAGACCCCTACCCCTCCCGACTCGTCGAGATAGTGACTCCTACTCACACCTAATCAC

35,785

KIF5A

KIF5A-202

KIF5A-202

GTCTCAGACTAGTGGAGGGTGGGTGTCAGAGGCTGCCTCTTTCTCTGCTCCATCCAGCTTTGCAAACCTCCTGTACCAGCAGTG  
CAGGAGTCTGATCACCTCCCACCCACAGTCTCCGACGGAGAAAGGAGACGAGGTAGGTCGAAACGTTTGAGGACATGGTCGTCAC

35,870

KIF5A

KIF5A-202

975  
F A N S C T S S  
ENSE00001108595

KIF5A-202

GAGCCACATCTTCTGGCGGCCCTTGGCTTCTACCAGAAGGCCAACATGGACAATGGTGAGTGAAAAAGATGGGTAATCCCACC  
CTCGGTGTAGAAGACCGCCGGGAACCGAAGGATGGTCTTCCGGTTGTACCTGTTACCACTCACTTTTTCTACCCATTAGGGTGG

35,955

KIF5A

KIF5A-202

980 985 990 995  
G A T S S G G P L A S Y Q K A N M D N  
ENSE00001108595

KIF5A-202

TTTGGGGTCCTCAGGGCAAGTTGAGAGGCATAAAAGTAAGTGACCTTAGTGACAAAAAACACTGACTGAACCTTTCTGGTGTGC  
AAACCCAGGAGTCCCGTTCAACTCTCCGTATTTTCATTCACTGGAATCACATGTTTTTTGTGACTGACTTGGAAAGACCACACG

36,040

KIF5A

KIF5A-202

KIF5A-202

CAAGGCTTCAAATAAAAAAAAAAATACATATAGCCAGGTGTGGTGGCATGCACCTGTAGTCCTAGCTACTTGGGAGGTTGAGATA  
GTTCCGAAGTTTATTTTTTTTTTTATGTATATCGGTCCACACCACCGTACGTGGACATCAGGATCGATGAACCTCCAACCTCTAT

36,125

KIF5A

KIF5A-202

KIF5A-202

GGAGGATTGCTTGAGCTCAGGAGCTTAAGGCTGAAGTGCACCTGTGAATACACCTGTGAATAGCCACTGCACTCAGCCTGGGCAGC  
CCTCCTAACGAACTCGAGTCTCGAATTCCGACTTCACGTGACACTTATGTGGACACTTATCGGGTACGTGAGTCGGACCCGTCG

36,210

KIF5A

KIF5A-202

KIF5A-202

ATAGTAAAGCCCCATCTCTAAAATAATAATAAACACATATGAAGAAAAAAGTGACCCTGTACCTACAGCCTGAGCACTGCCCA  
TATCATTTCGGGGTAGAGATTTTATTATTATTATTGTGTATACTTCTTTTTTCACTGGGACATGGATGTCGGACTCGTGACGGGT

36,295

KIF5A

KIF5A-202

KIF5A-202

GCCCTTTAGGTCTCAGGCTGCCTGGGAGTGGATTCTCTATTACCACGCCAATCCCAGCCCTTGCCCTTCCAGTTCCTTTTTCT  
CGGGAAATCCAGAGTCCGACGGACCCTCACCTAAGGAGGATAATGGTGCGGTTAGGGTCGGGAACGGAAGGTCAAGGGAAAAGGA

36,380

KIF5A

KIF5A-202

KIF5A-202

CTCCTTGGTGAGGGGCTGCAGAACTTTTTCTCGAACAAAATAATGATGTAGCTTGGGATAACTAAGGAGAAAAGTGTACAGCTT  
GAGGAACCACTCCCCGACGTCTTTGAAAAAGAGCTTGTTTTATTACTACATCGAACCCCTATTGATTCTCTTTCACAGTGTGCGAA

36,465

KIF5A

KIF5A-202

KIF5A-202

ATCTTTTTCTCTAAGGGATTAAGATGGGAGAGGGTTTGCGCAAACTGTTTCTAACACCCAATCTCCTTTTTTCTTCTTCTAATCC  
TAGAAAAAGAGATTCCCTAATTCTACCCTCTCCCAAACGCGTTTGACAAAGATTGTGGGTTAGAGGAAAAAAGAAGAAGATTAGG

36,550

KIF5A

KIF5A-202

KIF5A-202

TGTGTTCTCAATGATGATCTCTTCAGGAAATGCCACAGATATCAATGACAATAGGTACAACAGTCCCCACTACCCCTGGGTTCTC  
ACACAAGAGTTACTACTAGAGAAGTCCTTTACGGTGTCTATAGTTACTGTTATCCATGTTGTCAGGGGTGATGGGGACCCAAGAG

36,635

KIF5A

KIF5A-202

G N A T D I N D N R  
ENSE00001108591

KIF5A-202

TGGGTGGGACCAGAAGAAATGATTAAATTTCCCTTGTGCCCACTTGAGAGTTCTGGAGCCTTTGGGGAAGGGGGAGGGAGTGA  
ACCCACCCTGGTCTTCTTTACTAATTTAAAGGGAACACGGGGTGAACCTCCAAGGACCTCGGAAACCCCTTCCCCCTCCCTCACT

36,720

KIF5A

KIF5A-202

KIF5A-202

GACTCATTCTTTTCATCACTGTGTTGTCCAGGAGATCCAGTCATTCCCCTGCCTCAGTGCAGAATATCTCCCCTCCTCCAATCCC  
CTGAGTAAGAAAAGTAGTGACACAACAGGTCCTCTAGGTCAGTAAGGGGACGGAGTCACGTCTTATAGAGGGGAGGAGGTTAGGG

36,805

KIF5A

KIF5A-202

KIF5A-202

ATCTGTGGCTTCTCCCTATTCCAGTGATAAGGTCTGGACGAAAACAACGTGGGCATCTGACGACTGGGTTTCTCTCCTACCTTTG  
TAGACACCGAAGAGGGGATAAGGTCACACTATTCCAGACCTGCTTTTGTGACCCGTAGACTGCTGACCCAAAGAGAGGATGGAAAC

36,890

KIF5A

KIF5A-202

KIF5A-202

GAAGCCTTGTGACATTGGACAAGTCATTTACATCCCTCTGGCCTTGAGTTTTCCCTGTATTCTGTAAAACACAAATAGTCCCTGC  
CTTCGGAACACTGTAACCTGTTTCAGTAAATGTAGGGAGACCGGAACTCAAAGGGACATAAAGGACATTTTGTGTTTATCAGGGACG

36,975

KIF5A

KIF5A-202

KIF5A-202

CGTTTGTGATCTCACAGGGACACTCTCAGAGCAGAGTAACCATGATGACAGGAATACTTTAATTTCTATGGAGCTGATCATGGTG  
GCAAACACTAGAGTGTCCCTGTGAGAGTCTCGTCTCATTGGTACTACTGTCTTATGAAATTAAGATACCTCGACTAGTACCAC

37,060

KIF5A

KIF5A-202

KIF5A-202

GGTCTCTTCCCTCCAGGAGTGACCTGCCGTGTGGCTATGAGGCTGAGGACCAGGCCAAGCTTTTTCCCTCTCCACCAAGAGACAGCA  
CCAGAGAAGGAGGTCCTCACTGGACGGCACACCGATACTCCGACTCCTGGTCCGGTTCGAAAAGGGAGAGGTTGTTCTCTGTCTG

37,145

KIF5A

KIF5A-202

KIF5A-202

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ENSE00001140534

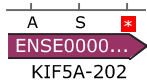
KIF5A-202

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CGGTTCGATTAGAGGGTGTGGGTGCCGACGTATGGACGTGAAAGTCCATCGCAGTCCGACGAAGGAGCCTGGTCGGAGTCCAACGA

37,230

KIF5A

KIF5A-202



TCCCTTCTTGCTGACAGCCTCTTTGGTTTTCTGCTGCTGCTTCTTTTTTTTTTATCACCTCAAACCTTTAATTATGTAGTTAC  
AGGGAAGAACGACTGTCGGAGAAAACAAAAGGACGACGACGAAGAAAAAAAAAATAGTGGAGTTTGAATTAATACATCAATG

37,315

KIF5A

KIF5A-202

CCCTCAACTCCTGCTTTCCCCTGTTGGGGGCTACACCTGTGCTGCCCATGTAATCTGGACGTTGACCTCCCGTGCCCCCTTTTG  
GGGAGTTGAGGACGAAAAGGGGACAACCCCGATGTGGACACGACGGGGTACATTAGACCTGCAACTGGAGGGCACGGGGGAAAAC

37,400

KIF5A

KIF5A-202

CTTTCCGTTAGGCTACAGTGGTAACCACAGTACTGTCTTTTTGCCACTAGGGGGTCACTGTACACATGTCCAAAGAAGTGAGCTTGG  
GAAAGGCAATCCGATGTCACCATTGGTGTGATGACAGAAAAACGGTGATCCCCAGTGACAGTGTACAGGTTTCTTCACTCGAACC

37,485

KIF5A

KIF5A-202

CCGCTGTAGATTAGAACCACAGGGGTGGTAGACTGCAGATCTATCAGGAGACCCTAGGGGGCCATCTCAACCCACCTCTTCCTC  
GGCGACATCTAATCTTGGTGTCCCCACCATCTGACGTCTAGATAGTCCTCTGGGATCCCCCGGTAGAGTTGGGGTGGAGAAGGAG

37,570

KIF5A

KIF5A-202

CACCTGAAATAATTTTGGATGGATAGGTGTTTTTGGAACTAAGACATCTCCAGTTAAGGCGATGTTTGCTTCACGCCTGCACCT  
GTGGGACTTTATTAACCTACCTATCCACAAAAACCTTGATTCTGTAGAGGTCAATTCCGCTACAAACGAAGTGC GGACGTGGA

37,655

KIF5A

KIF5A-202

GTGTCCCATCCTCTTCCCATCTGTATATGCCACCAGTAAGCTTTAGGAAACGCCCCACGAAATCAGTCAGCGCTCCCCTCCCATC  
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37,740

KIF5A

KIF5A-202

TTGCTCAGTGGAGGTGGCAAAGCCCCTCTTTTTCTCCTCTGTCCCCAGGTGCTCTCCTCTAGCAGCACAGGAACCTTCTTTGTT  
AACGAGTCACCTCCACCGTTTTCGGGGAGAAAAAGGAGGAGACAGGGGTCCACGAGAGGAGATCGTCTGTCTTTGGAAGAAACAA

37,825

KIF5A

KIF5A-202

CTTGTGTGCTCACTGGGTTTCTCACCAAGGTTGCTTTAGGGCCCAGAAGTGGCACAGAGAACATGGCCAGTCTCTTACTGGGCTGC  
GAACACACAGTGACCCAAAGAGTGGTTCCAACGAAATCCCGGGTCTTACCCTGTCTCTTGTACCGGTGACAGAGAATGACCCGACG

37,910

KIF5A

KIF5A-202

ATCTAAGCTGAGCCCTCTCCAGGGGTTTTCCAGAAATAGTAAACCAGGCACACACAGGCAGAAAAGTCTGAGAAGCAGAGAAGTAG  
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37,995

KIF5A

KIF5A-202

GAATGCAGAAGAGGAGTTGGGGAGACCTAGGGGTGGAGGTGCAAGCCTGGGTACGCGGGGGCGGTGGTAGGGGGGTCTGCTTGT  
CTTACGTCTTCTCCTCAACCCCTCTGGATCCCCACCTCCACGTTTCGGACCCAGTGCCCCCGCCACCATCCCCCAGACGAACAA

38,080

KIF5A

KIF5A-202

GGTATTAAGGAACAGGACAGTAAACCAAAGTGTGTGACAGATGCCACCTGTTCTCTGTGACTGAGCTACAAGCTGGGCCCT  
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38,165

KIF5A

KIF5A-202

CACACCTCTTTCTCTTTCTTTCCAGTTTTCTAAGAGGGACTGAGGCCTCTTCTCAGCATGCTGCAAACCTGTGGTCTCTGATAC  
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38,250

KIF5A

KIF5A-202

TAACTCCCTCCCAACCCCTGTTGTTGGACTGTACTATGTTTGGATGTCTTCTTACTTACTCTGTATCTCTTTGTA

38,335

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KIF5A

KIF5A-202

CTATATATCAAAAGCTGCTGCTATGTCTCTCTTCTGTCTTATTCTCAAGTATCTACTGATGATTTAGCAATTTCAAAGCATAGT

38,420

GATATATAGTTTTGACGACGATACAGAGAGAAGACAGAATAAGAGTTCATAGATGACTACATAAATCGTTAAAGTTTCGTATCA

KIF5A

KIF5A-202

CTACCTTCCTTATTTGGGGCAATAGGGAGGAGGGTGAATGTTTCTTCTTCTCATCTACTCGTCTCACACTGAGTGGTGTAGTC

38,505

GATGGAAGGAATAAACCCCGTTATCCCTCCTCCCACTTACAAAGAAGAAAGAGTAGATGAGCAGAGTGTGACTCACCACAATCAG

KIF5A

KIF5A-202

ACTGAGTAGAGGTCACAGAGATGACAAAAGGAAAAATGGGAGCTAGAGGGTTGTGACCCTTCATACACACACGCACGCACGCACA

38,590

TGACTCATCTCCAGTGTCTCTACTGTTTTCTTTTTACCCCTCGATCTCCCAACTGGGAAGTATGTGTGTGCGTGCGTGCGTGT

KIF5A

KIF5A-202

CAACATGCACACACGCATGCACACACACAAAGCCTTAAGCAGAAGAATGTCTTAGCATCATGAGACAGAGAAATAGACTCTTCC

38,675

GTTTGTACGTGTGTGCGTACGTGTGTGTGTTTCGGAATTCGTCTTCTTACAGAATCGTAGTACTCTGTCTCTTTATCTGAGAAGG

KIF5A

KIF5A-202

TCCCTCCTCTTTTACATATAGCACAGGGGAAGGTAAAATGGAAGGGCTGCTAATTGAGACATATAATTTTCTTACACACCCCTC

38,760

AGGGAGGAGAAAAGTGATATATCGTGTCCCTTCCATTTTACCTTCCCGACGATTAACTCTGTATATTAAGAAGTATGTGGGGAG

KIF5A

KIF5A-202

ACCTTAATCAAAGGATTCAGGTGTTACTTCTGCCCTACAAAGTCTGCCTTTTGCCTCCCTCTTCTGTTTTCCCTGGACTGAGA

38,845

TGGAATTAGTTTCTAAGTCCACAATGAAGACGGGATGTTTCAGACGGAAAACGGAGGGAGAAGGACAAAAGGGGACCTGACTCT

KIF5A

KIF5A-202

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38,930

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KIF5A

KIF5A-202

GCTGATTTAAAATATTTTGA AAAATGGAGGAGGCAGACTGCTCCCAGCAGCCTGTCAATGGCTGCTCATCTGTCCATGGAGATGG

39,015

CGACTAAATTTTATAAAACTTTTTTACCTCCTCCGTCTGACGAGGGTCTCGGACAGTTACCGACGAGTAGACAGGTACCTCTACC

KIF5A

KIF5A-202

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39,100

AATGTCCGTCCACATCAGTTTTACTA ACTAAGGAACCCAAACCCCACTTATCCGACCCTTTAAAGACTCGGAAAAAAAAAACAG

KIF5A

KIF5A-202

ACAGTGCCCTCAAGTTGAAGTGATGAGCTGGATTTCTTTCTTGTTCATACTGGGCGGCATGCTCCTCCCATCTCCACCCCTTGG  
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39,185

KIF5A

KIF5A-202

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39,270

KIF5A

KIF5A-202

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39,355

KIF5A

KIF5A-202

GAGGTGGGAAGCTCTAAGGCTTGACCCTGAGGGGTCTTCTCCAGCCATTCTCAGCCCATATGCAGCACCCCTCCATACTGAAGAG  
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39,440

KIF5A

KIF5A-202

GACTGTTGTTTTAGTTTTCAGACGGTCTTTTCTTCCACATGGTGCTAAGGTGGTTTTCTAGGTAAGTGCAGGGATGGAGGTCACT  
CTGACAACAAAATCAAAGTCTGCCAGGAAAGGAAGGTGTACCACGATTCCACCAAAAAGATCCATTGACGTCCCTACCTCCAGTGA

39,525

KIF5A

KIF5A-202

AGCCATTCCAAACCAGGAGAGAAAAGTCTGGTGTCTGATATCCAGTCTTTTTCTAGGAGGAAGACCAAGATTCTCCAGCGGCAGGG  
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39,610

KIF5A

KIF5A-202

CAGCCTATCACCCAACCTTCTAAGTCAGGAAAGGAAGCTGAGTGGGAATGCCAGCTGGTAAGCGCAGGCTGCACTGGCCCATGACT  
GTCGGATAGTGGGTTGAAGATTCAAGTCTTTTCTTTCGACTCACCTTACGGTCGACCATTTCGCGTCCGACGTGACCGGGTACTGA

39,695

KIF5A

KIF5A-202

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39,780

KIF5A

KIF5A-202

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39,865

KIF5A

KIF5A-202

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39,950

KIF5A

KIF5A-202



AAGGCTCCTCAGCAAATGAGCCCTTGAACAGTCCTAAGAGACCCTGAGGATTCTGTGGAGTAGTTTGAAAACCATTTGTTCTGAGG  
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40,035

KIF5A

KIF5A-202

AAGGGGGTCCAATCTGGCTCCTCTGCACTAAAGCTGCAACTCATGGAAAAGAGGGCAACGGTGGGGTAGACAAGCCATGCTGTCT  
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40,120

KIF5A

KIF5A-202

CCAGACCCACTAGGGTGAAGGAAGGTTCTGTGGGCCTGTGGACTTAGGCTAATATTTGCTGTGTCAGCAGGGCACTTAAGAATCC  
GGTCTGGGTGATCCCACCTTCTTCCAAGGACACCCGGACACCTGAATCCGATTATAAACGACAGTCGTCCCGTGAATTTCTTAGG

40,205

KIF5A

KIF5A-202

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40,290

KIF5A

KIF5A-202

GATGACACAGAGGGAGCAGCCTTCTCTTTAGCAAGATGTAAGGGAAATATAATTCACTTACATAAAAAAGAAACAACACACACGC  
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40,375

KIF5A

KIF5A-202

AAACCTTCACCAGAAGCTTCACACTACATCCTCCTCCTCCTGCTCCCCACCTTCACCGCATCCCTTTTCAGAGCCAGGGTCA  
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40,460

KIF5A

KIF5A-202

CTGCAAGGGGCACCTGGCCTGCCCACTCACATCTGCCAAAATGTTGCATGCCAGCGTGGAAAGACAAACCAAACCTGCGCAACCCCC  
GACGTTCCCGTGGACCGGACGGGTGAGTGTAGACGGTTTTACAACGTACGGTTCGCACCTTCTGTTTGGTTTGGACGCGTTGGGGG

40,545

KIF5A

KIF5A-202

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3 '  
40,608  
5 '

KIF5A

























KIF5A-202

Feature	Location	Size	Type
✓ <b>KIF5A</b>	1 .. 40,608	40,608 bp	gene
/note = gene <a href="#">ENSG00000155980</a> Protein coding			
<b>KIF5A-227</b>	1 .. 18,187	18,187 bp	prim_transcript
/note = primary transcript <a href="#">ENST00000676250</a>			
<b>DCTN2-213</b>	3 .. 1149	1147 bp	prim_transcript
/note = primary transcript <a href="#">ENST00000549712</a> protein_coding_CDS_not_defined			
<b>DCTN2-232</b>	1576 .. 1181	40,214 bp	prim_transcript
/note = primary transcript <a href="#">ENST00000678990</a> Retained intron			
<b>DCTN2-203</b>	3078 .. 1168	38,699 bp	prim_transcript
/note = primary transcript <a href="#">ENST00000546559</a> protein_coding_CDS_not_defined			
<b>KIF5A-204</b>	4002 .. 40,605	36,604 bp	prim_transcript
/note = primary transcript <a href="#">ENST00000674619</a>			
✓ <b>KIF5A-202</b>	4019 .. 40,608	36,590 bp	prim_transcript
/note = primary transcript <a href="#">ENST00000455537</a>			
<b>KIF5A-201</b>	4019 .. 38,623	34,605 bp	prim_transcript
/note = primary transcript <a href="#">ENST00000286452</a>			
<b>KIF5A-230</b>	4019 .. 18,187	14,169 bp	prim_transcript
/note = primary transcript <a href="#">ENST00000676359</a>			
<b>KIF5A-211</b>	4019 .. 17,668	13,650 bp	prim_transcript
/note = primary transcript <a href="#">ENST00000675216</a> Nonsense mediated decay			
<b>KIF5A-209</b>	4019 .. 17,501	13,483 bp	prim_transcript
/note = primary transcript <a href="#">ENST00000675023</a> Nonsense mediated decay			
<b>KIF5A-232</b>	4080 .. 40,567	36,488 bp	prim_transcript
/note = primary transcript <a href="#">ENST00000676457</a>			
<b>KIF5A-201</b>	4247 .. 37,154	32,908 bp	CDS
▶ 25 segments = 2832 bp			
/note = coding sequence <a href="#">ENSP00000286452</a>			
/translation = MAETNNECSIKVLCRFRPLNQA EILRGDKFIPIFQGDDSVVIG,,VSYFEIYLDKIRDLLD,,VTKTNLSVHEDKNRVPFVK,,GCTERFVSSPEILDVI DEGKSNRHVAVT,,NMNEHSSRSHSIFLINIKQENMETEQ KLSGKLYLVDLAGSEK,,VSKTGAEGAVLDEAKNINKSLSALGNVISALAEQT,,KSYV PYRDSKMTRILQDSLGGNCRRTTMFICCPSSYNDAETKSTLMFGQR,,AKTIKNTASVNLELTAEQ WKKKYEKEKEKTKAQKETIAKLEAELSRWRN ,,GENVPETERLAGEEAALGAELCEETPVNDNSSIVVRIAPEERQKYEEEIRRLYKQLDDK,,DDEINQQSQLIEKLLKQQLMDQEE,,LLVSTRGDNE KVQRELSHLQSENDAAKDEVKEVLQALEELAVNYDQKSQVEEKSQQNQLLVDELSQKV,,ATMLSLESELQRLQEVSGHQKRIA EVLNGLMK DLSEFSVIVGNGEIKL,,PVEISGAIEEEFTVARLYISKIKSEVKSVVKRCRQLENLQVECHRKMEVTGRELSSCQLLISQ,,HEAKIRSLTEYMQSVE LKKRHLEESYDLSDELAKLQAQ,,ETVHEVALKDKEPDTQDADEVK,,KALELQ MESHREAHHRQLARLRDEINEKQKTIDELKD,,LNQKLQLELE KLQADYEKLEKSEEHEKSTKLQELT,,FLYERHEQSKQDLKGLEETV,,ARELQTLHNLRLKLFVQDVTTRVKK,,SAEMEPEDSGGIHSQKQKISFLENNL EQLTQVHKQ,,LVRDNADLRCLEPKLEKRLRATAERVKALEGALKEAKEGAMKDKRRYQQEVDRIKEAVRYKSSGKRGHSAQI,,AKPVRPGHYPAS SPTNRYGTRSECSYVNSLQANLYQNLQATPSSTSDMY,,FANSTSSGATSSGGPLASYQKANMDN,,GNATDINDNR,,SDLPCGYEAEDQAK LFPLHQETAAS*			
✓ <b>KIF5A-202</b>	4247 .. 37,154	32,908 bp	CDS
▶ 28 segments = 3099 bp			
/note = coding sequence <a href="#">ENSP00000408979</a>			
/translation = MAETNNECSIKVLCRFRPLNQA EILRGDKFIPIFQGDDSVVIG,,GKPYVFDVFPNNTTQEQVYHACAMQIVK,,DVLGYNGTIFAYGQTSSGKT HTME,,GKLHDPQLMGIIPRIARDIFNHIYSMDENLEFHIK,,VSYFEIYLDKIRDLLD,,VTKTNLSVHEDKNRVPFVK,,GCTERFVSSPEILDVIDEG KSNRHVAVT,,NMNEHSSRSHSIFLINIKQENMETEQ KLSGKLYLVDLAGSEK,,VSKTGAEGAVLDEAKNINKSLSALGNVISALAEQT,,KSYV PYRDSKMTRILQDSLGGNCRRTTMFICCPSSYNDAETKSTLMFGQR,,AKTIKNTASVNLELTAEQ WKKKYEKEKEKTKAQKETIAKLEAELSRWRN,,GE NVPETERLAGEEAALGAELCEETPVNDNSSIVVRIAPEERQKYEEEIRRLYKQLDDK,,DDEINQQSQLIEKLLKQQLMDQEE,,LLVSTRGDNEKVQ RELSHLQSENDAAKDEVKEVLQALEELAVNYDQKSQVEEKSQQNQLLVDELSQKV,,ATMLSLESELQRLQEVSGHQKRIA EVLNGLMKDLSE FSVIVGNGEIKL,,PVEISGAIEEEFTVARLYISKIKSEVKSVVKRCRQLENLQVECHRKMEVTGRELSSCQLLISQ,,HEAKIRSLTEYMQSVELKRR HLEESYDLSDELAKLQAQ,,ETVHEVALKDKEPDTQDADEVK,,KALELQ MESHREAHHRQLARLRDEINEKQKTIDELKD,,LNQKLQLELEKLQA DYEKLEKSEEHEKSTKLQELT,,FLYERHEQSKQDLKGLEETV,,ARELQTLHNLRLKLFVQDVTTRVKK,,SAEMEPEDSGGIHSQKQKISFLENNL EQLTQVHKQ,,LVRDNADLRCLEPKLEKRLRATAERVKALEGALKEAKEGAMKDKRRYQQEVDRIKEAVRYKSSGKRGHSAQI,,AKPVRPGHYPAS SPTNRYGTRSECSYVNSLQANLYQNLQATPSSTSDMY,,FANSTSSGATSSGGPLASYQKANMDN,,GNATDINDNR,,SDLPCGYEAEDQAKLFPL HQETAAS*			

Feature	Location	Size	Type
<b>KIF5A-204</b>	4247 .. 37,154	32,908 bp	CDS
▶ 29 segments = 3120 bp			
/note	= coding sequence <a href="#">ENSP00000502270</a>		
/translation	= MAETNNECSIKVLCRFRPLNQA EILRGDKFIPIFQGDDSVVIG,,GKPYVFD RVPNTTTEQVYHACAMQIVK,,DVL AGYNGTIFAYGQTSSGKT HTME,,GKLHDPQLMGIIPRIARDIFNHIYSMDENLEFHIK,,VSYFEIYLDKIRDLLD,,VTKNLSVHEDKNRVPFVK,,GCTERFVSSPEEILDVIDEG KSNRHVAVT,,NMNEHSSRSHSIFLINIKQENMETEQKLSGKLYLDLAGSEK,,VSKTGAEGAVLDEAKNINKLSLALGNVISALAEAGT,,KSYV P YR DSKMTRILQDSLGGNCRTTMFICCPSSYNDAETKSTLMFGQR,,AKTIKNTASVNLELTA EQWKKKYEKEKEKTKAQKETIAKLEAELSRWRN,,GE NVPETERLAGEEAALGAELCEETPVNDNSSIVVRIAPEERQKYEEEIRRLYKQLDDK,,DDEINQ QSQLIEKLLKQMLDQEE,,LLVSTRGDNEKVQ RELSHLQSENDAAKDEVKEVLQALEELAVNYDQKSQVEEEKSQQNQLLVDELSQKV,,ATMLSLESELQRLQEVSGHQRKRIAEVNLGLMKDLSE FSVIVGNGEIKL,,PVEISGAIEEFTVARLYISKIKSEVKS VVKRCRQLENLQVECHRKMEVTGRELSSCQLLISQ,,HEAKIRSLTEYMQSVELKRR HLEESYDLSDELAKLQAQ,,ETVHEVALKDKEPDTQDADEVK,,KALELQ MESHREAHHRQLARLRDEINEKQKTIDELKD,,LNQKLQLELEKLQA DYKLEKSEEHEKSTKLQELT,,FLYERHEQSKQDLKGLEETV,,ARELQTLHNLRLKLFVQDVTTRVKK,,SAEMEPEDSGGIHSQKQKISFLENNLEQLT KVVHKQ,,VDDWVSK,,LVRDNA DLRCLELPKLEKRLRATAERVKAL EGALKEA KEGAMKDKRRYQQEVDRIKEAVRYKSSGKRGHSAQI,,AKPVRPG HYPASSPTNYPYGT RSPECISYTNLSLFQNYQNLYLQATPSS TDMY,,FANCSSTSSGATSSGGPLASQYKANMDN,,GNATDINDNR,,SDLPCGYEAE DQAKLFLPHQETAAS*		
<b>KIF5A-232</b>	4247 .. 37,154	32,908 bp	CDS
▶ 27 segments = 2994 bp			
/note	= coding sequence <a href="#">ENSP00000501588</a>		
/translation	= MAETNNECSIKVLCRFRPLNQA EILRGDKFIPIFQGDDSVVIG,,GKPYVFD RVPNTTTEQVYHACAMQIVK,,DVL AGYNGTIFAYGQTSSGKT HTME,,VSYFEIYLDKIRDLLD,,VTKNLSVHEDKNRVPFVK,,GCTERFVSSPEEILDVIDEGKSNRHVAVT,,NMNEHSSRSHSIFLINIKQENMETE QKLSGKLYLDLAGSEK,,VSKTGAEGAVLDEAKNINKLSLALGNVISALAEAGT,,KSYV P YR DSKMTRILQDSLGGNCRTTMFICCPSSYNDAETK STLMFGQR,,AKTIKNTASVNLELTA EQWKKKYEKEKTKAQKETIAKLEAELSRWRN,,GENVPETERLAGEEAALGAELCEETPVNDNSSIVVRI APEERQKYEEEIRRLYKQLDDK,,DDEINQ QSQLIEKLLKQMLDQEE,,LLVSTRGDNEKVQ RELSHLQSENDAAKDEVKEVLQALEELAVNYDQK SQVEEEKSQQNQLLVDELSQKV,,ATMLSLESELQRLQEVSGHQRKRIAEVNLGLMKDLSEFSVIVGNGEIKL,,PVEISGAIEEFTVARLYISKIKS EVKSVVKRCRQLENLQVECHRKMEVTGRELSSCQLLISQ,,HEAKIRSLTEYMQSVELKRRHLEESYDLSDELAKLQAQ,,ETVHEVALKDKEPDT QDADEVK,,KALELQ MESHREAHHRQLARLRDEINEKQKTIDELKD,,LNQKLQLELEKLQADYEKLEKSEEHEKSTKLQELT,,FLYERHEQSKQDLK GLEETV,,ARELQTLHNLRLKLFVQDVTTRVKK,,SAEMEPEDSGGIHSQKQKISFLENNLEQLTKVVHKQ,,LVRDNA DLRCLELPKLEKRLRATA ERVKAL EGALKEA KEGAMKDKRRYQQEVDRIKEAVRYKSSGKRGHSAQI,,AKPVRPGHYPASSPTNYPYGT RSPECISYTNLSLFQNYQNLYLQATPSS TDMY,,FANCSSTSSGATSSGGPLASQYKANMDN,,GNATDINDNR,,SDLPCGYEAE DQAKLFLPHQETAAS*		
<b>KIF5A-230</b>	4247 .. 18,187	13,941 bp	CDS
▶ 2 segments = 234 bp			
/note	= coding sequence <a href="#">ENSP00000502609</a>		
/translation	= MAETNNECSIKVLCRFRPLNQA EILRGDKFIPIFQGDDSVVIG,,GKLHDPQLMGIIPRIARDIFNHIYSMDENLEFHIK 78 amino acids = 9.0 kDa		
<b>DCTN2-208</b>	10,530 .. 1181	31,260 bp	prim_transcript
/note	= primary transcript <a href="#">ENST00000547480</a> Retained intron		
<b>DCTN2-207</b>	11,047 .. 1163	30,725 bp	prim_transcript
/note	= primary transcript <a href="#">ENST00000547345</a> Retained intron		
<b>DCTN2-204</b>	13,031 .. 1160	28,738 bp	prim_transcript
/note	= primary transcript <a href="#">ENST00000546670</a> Protein coding		
<b>DCTN2-218</b>	13,232 .. 1096	28,473 bp	prim_transcript
/note	= primary transcript <a href="#">ENST00000550954</a> Protein coding		
<b>DCTN2-217</b>	14,010 .. 1197	27,796 bp	prim_transcript
/note	= primary transcript <a href="#">ENST00000550750</a> Nonsense mediated decay		
<b>DCTN2-222</b>	14,010 .. 1054	27,653 bp	prim_transcript
/note	= primary transcript <a href="#">ENST00000551611</a> Nonsense mediated decay		
<b>DCTN2-212</b>	15,408 .. 1095	26,296 bp	prim_transcript
/note	= primary transcript <a href="#">ENST00000549394</a> Nonsense mediated decay		
<b>DCTN2-215</b>	15,671 .. 1127	26,065 bp	prim_transcript
/note	= primary transcript <a href="#">ENST00000550201</a> Nonsense mediated decay		
<b>DCTN2-201</b>	15,714 .. 1116	26,011 bp	prim_transcript
/note	= primary transcript <a href="#">ENST00000434715</a> Protein coding		
<b>DCTN2-228</b>	15,715 .. 1199	26,093 bp	prim_transcript
/note	= primary transcript <a href="#">ENST00000678322</a> Protein coding		

Feature	Location	Size	Type
<b>DCTN2-202</b>	15,715 .. 1152	26,046 bp	prim_transcript
/note = primary transcript <a href="#">ENST00000543672</a> Protein coding			
<b>DCTN2-231</b>	15,715 .. 666	25,560 bp	prim_transcript
/note = primary transcript <a href="#">ENST00000678653</a> Protein coding			
<b>DCTN2-230</b>	15,872 .. 1197	25,934 bp	prim_transcript
/note = primary transcript <a href="#">ENST00000678521</a> Nonsense mediated decay			
<b>DCTN2-224</b>	15,946 .. 1152	25,815 bp	prim_transcript
/note = primary transcript <a href="#">ENST00000552390</a> Retained intron			
<b>DCTN2-229</b>	15,951 .. 1152	25,810 bp	prim_transcript
/note = primary transcript <a href="#">ENST00000678505</a> Protein coding			
<b>DCTN2-209</b>	15,974 .. 1167	25,802 bp	prim_transcript
/note = primary transcript <a href="#">ENST00000548249</a> Protein coding			
<b>DCTN2</b>	16,392 .. 1199	25,416 bp	gene
/note = gene <a href="#">ENSG00000175203</a> Protein coding			
<b>KIF5A-227</b>	18,107 .. 18,187	81 bp	CDS
/note = coding sequence <a href="#">ENSP00000501749</a>			
/translation = MGIIIPRIARDIFNHIYSMDENLEFHIK 27 amino acids = 3.3 kDa			
✓ <b>Donor Template WT -&gt; SNV</b>	22,970 .. 23,069	100 bp	misc_feature
✓ <b>Protospacer Sequence</b>	22,988 .. 23,007	20 bp	misc_feature
✓ <b>SNV</b>	22,990 .. 22,990	1 bp	misc_feature
/note = WT = A SNV = G			
✓ <b>PAM</b>	23,008 .. 23,010	3 bp	misc_feature
<b>KIF5A-225</b>	23,266 .. 33,860	10,595 bp	prim_transcript
/note = primary transcript <a href="#">ENST00000676081</a> Retained intron			
<b>KIF5A-220</b>	23,555 .. 40,399	16,845 bp	prim_transcript
/note = primary transcript <a href="#">ENST00000675882</a> Retained intron			
<b>KIF5A-205</b>	25,296 .. 25,584	289 bp	prim_transcript
/note = primary transcript <a href="#">ENST00000674653</a> protein_coding_CDS_not_defined			
<b>KIF5A-223</b>	25,744 .. 33,822	8079 bp	prim_transcript
/note = primary transcript <a href="#">ENST00000675984</a> Retained intron			
<b>KIF5A-229</b>	26,036 .. 29,247	3212 bp	CDS
▶ 2 segments = 396 bp			
/note = coding sequence <a href="#">ENSP00000501978</a>			
/translation = LLVSTRGDNEKVVQRELSHLQSENDAAKDEVKEVLQALEELAVNYDQKSQVEEKSQQNQLLVDELSQKV,,PVEISGAIEEEFTVARLYISKIKSE VKSVVKRCRQLENLQVECHRKMEVTGRELSSCQLLISQ 132 amino acids = 15.1 kDa			
<b>KIF5A-229</b>	26,036 .. 29,247	3212 bp	prim_transcript
/note = primary transcript <a href="#">ENST00000676352</a>			
<b>KIF5A-226</b>	26,036 .. 26,701	666 bp	prim_transcript
/note = primary transcript <a href="#">ENST00000676242</a> protein_coding_CDS_not_defined			
<b>KIF5A-222</b>	26,116 .. 39,314	13,199 bp	prim_transcript
/note = primary transcript <a href="#">ENST00000675929</a> Retained intron			

Feature	Location	Size	Color	Symbol	Type
<b>KIF5A-215</b>	26,555 .. 29,247	2693 bp	■	→	CDS
▶ 2 segments = 234 bp					
/note	= coding sequence <a href="#">ENSP00000502531</a>				
/translation	= ATMLSLESELQLQE,,PVEISGAIEEEFTVARLYISKIKSEVKSVVKRCRQLENLQVECHRKMEVTGRELSSCQLLISQ 78 amino acids = 9.0 kDa				
<b>KIF5A-215</b>	26,555 .. 29,247	2693 bp	■	→	prim_transcript
/note	= primary transcript <a href="#">ENST00000675629</a>				
<b>KIF5A-212</b>	29,059 .. 30,837	1779 bp	■	→	prim_transcript
/note	= primary transcript <a href="#">ENST00000675299</a> Nonsense mediated decay				
<b>KIF5A-213</b>	30,768 .. 33,409	2642 bp	■	→	prim_transcript
/note	= primary transcript <a href="#">ENST00000675397</a> protein_coding_CDS_not_defined				
<b>KIF5A-206</b>	32,213 .. 35,543	3331 bp	■	→	prim_transcript
/note	= primary transcript <a href="#">ENST00000674776</a> Nonsense mediated decay				
<b>KIF5A-221</b>	32,213 .. 35,147	2935 bp	■	→	CDS
▶ 2 segments = 310 bp					
/note	= coding sequence <a href="#">ENSP00000502360</a>				
/translation	= SAEMEPEDSGGIHSQKQKISFLENNLEQLTK,,LVRDNADLRCELPKLEKRLRATAERVKALEGALKEAKEGAMKDKRRYQQEVDRIKEAVRYKSS 663 amino acids = 11.8 kDa				
<b>KIF5A-221</b>	32,213 .. 35,147	2935 bp	■	→	prim_transcript
/note	= primary transcript <a href="#">ENST00000675907</a>				
<b>KIF5A-216</b>	34,931 .. 35,543	613 bp	■	→	CDS
▶ 2 segments = 404 bp					
/note	= coding sequence <a href="#">ENSP00000502231</a>				
/translation	= LVRDNADLRCELPKLEKRLRATAERVKALEGALKEAKEGAMKDKRRYQQEVDRIKEAVRYKSSGKRGHSAQI,,ASSWLFSFFIAAKPVRPGRGHYPA SSPTNPYGTRSPECISYTNLSLFQNYQNLYLQATPSSTSDM 134 amino acids = 15.2 kDa				
<b>KIF5A-216</b>	34,931 .. 35,543	613 bp	■	→	prim_transcript
/note	= primary transcript <a href="#">ENST00000675634</a>				
<b>KIF5A-218</b>	34,989 .. 39,831	4843 bp	■	→	prim_transcript
/note	= primary transcript <a href="#">ENST00000675737</a> Retained intron				
<b>KIF5A-203</b>	35,653 .. 36,849	1197 bp	■	→	prim_transcript
/note	= primary transcript <a href="#">ENST00000552227</a> Retained intron				
<b>KIF5A-217</b>	35,845 .. 38,623	2779 bp	■	→	prim_transcript
/note	= primary transcript <a href="#">ENST00000675697</a>				
<b>KIF5A-217</b>	35,845 .. 38,199	2355 bp	■	→	CDS
▶ 3 segments = 205 bp					
/note	= coding sequence <a href="#">ENSP00000501809</a>				
/translation	= LCKLLYQQWSHIFWRPLGFLPEGQHGQW,,SDLPCGYEAEDQAKLFLHQETAAS*SPTPTAAYLHFQ,,FL 68 codons (1 internal stop codon)				
<b>KIF5A-224</b>	35,845 .. 36,604	760 bp	■	→	CDS
▶ 2 segments = 99 bp					
/note	= coding sequence <a href="#">ENSP00000501739</a>				
/translation	= LCKLLYQQWSHIFWRPLGFLPEGQHGQ*,,YQ*Q* 33 codons (2 internal stop codons)				
<b>KIF5A-224</b>	35,845 .. 36,604	760 bp	■	→	prim_transcript
/note	= primary transcript <a href="#">ENST00000676055</a>				
<b>KIF5A-231</b>	35,911 .. 39,873	3963 bp	■	→	prim_transcript
/note	= primary transcript <a href="#">ENST00000676437</a>				

Feature	Location	Size			Type
<b>KIF5A-231</b>	35,911 .. 36,902	992 bp			CDS
▶ 2 segments = 343 bp					
/note	= coding sequence <a href="#">ENSP00000502358</a>				
/translation	= GQHGGQW,,KCHRYQ*Q*VQQSPLPLGSLGGTRRD*ISLVPHLEVPGAFGEGGGSETHSFHHCVVQEIQSFPCLSAEYLPSSNPICGFSLFQ**GLDENNVGI*RLGFSPTFGSLV 114 codons (6 internal stop codons)				
<b>KIF5A-219</b>	36,577 .. 38,623	2047 bp			prim_transcript
/note	= primary transcript <a href="#">ENST00000675866</a>				
<b>KIF5A-219</b>	36,577 .. 38,199	1623 bp			CDS
▶ 2 segments = 35 bp					
/note	= coding sequence <a href="#">ENSP00000502341</a>				
/translation	= EMPQISMTI,,VS 11 amino acids = 1.2 kDa				
<b>KIF5A-210</b>	36,577 .. 37,190	614 bp			prim_transcript
/note	= primary transcript <a href="#">ENST00000675201</a> protein_coding_CDS_not_defined				
<b>KIF5A-228</b>	36,577 .. 37,190	614 bp			prim_transcript
/note	= primary transcript <a href="#">ENST00000676265</a> protein_coding_CDS_not_defined				
<b>KIF5A-208</b>	37,076 .. 40,608	3533 bp			prim_transcript
/note	= primary transcript <a href="#">ENST00000674980</a>				
<b>KIF5A-214</b>	37,076 .. 40,608	3533 bp			prim_transcript
/note	= primary transcript <a href="#">ENST00000675433</a>				
<b>KIF5A-207</b>	37,076 .. 37,481	406 bp			prim_transcript
/note	= primary transcript <a href="#">ENST00000674858</a>				
<b>KIF5A-207</b>	37,076 .. 37,154	79 bp			CDS
/note	= coding sequence <a href="#">ENSP00000502170</a>				
/translation	= E*PAVWL*G*GPGQAFSPPRDSSQL 26 codons (3 internal stop codons)				
<b>KIF5A-208</b>	37,076 .. 37,154	79 bp			CDS
/note	= coding sequence <a href="#">ENSP00000501935</a>				
/translation	= E*PAVWL*G*GPGQAFSPPRDSSQL 26 codons (3 internal stop codons)				
<b>KIF5A-214</b>	37,076 .. 37,154	79 bp			CDS
/note	= coding sequence <a href="#">ENSP00000502122</a>				
/translation	= E*PAVWL*G*GPGQAFSPPRDSSQL 26 codons (3 internal stop codons)				

Primer	Length	Binding Sites	Tm	Date Added
✓ <b>PCR Forward</b> /sequence = TGTAATATGTGGCAGGGGTTAGGGG 52% GC / 7873.2 Da	25-mer	22,721 .. 22,745	62°C	Jan 18, 2023
✓ <b>Sanger Sequencing</b> /sequence = TGGAACGAGGTGGTGACAGC 60% GC / 6247.1 Da	20-mer	22,867 .. 22,886	61°C	Jan 18, 2023
✓ <b>Donor Template WT -&gt; SNV</b> /sequence = GGGTGAGGGGACCTAAGGATCACTCACAGTGCCCTCAGCCAGTGCGGAGATCACATTGCCAGAGCTGACAGTGACTTGCTGATATTCT 55% GC / 7308.27 Da	100-mer	22,970 .. 23,069	78°C	Jan 18, 2023
✓ <b>gRNA Protospacer</b> /sequence = CAACAAGTCACTGTCAGCTC 50% GC / 6046.0 Da	20-mer	22,988 .. 23,007	56°C	Jan 18, 2023
✓ <b>PCR Reverse</b> /sequence = TTCTTAATGGTCTTTGCCCTGGGTG 48% GC / 7661.0 Da	25-mer	23,503 .. 23,527	61°C	Jan 18, 2023