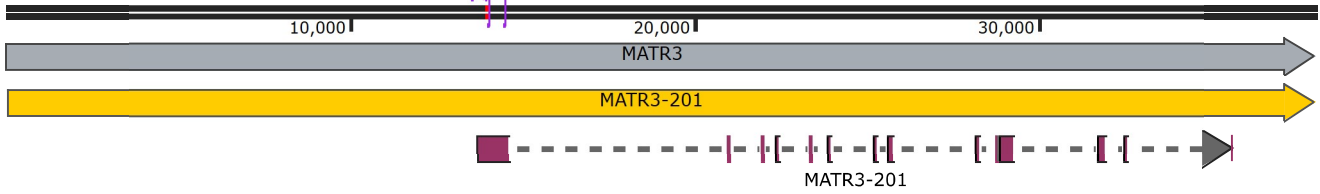


(13,989 .. 14,008) gRNA Protospacer
(13,884 .. 13,903) Sanger Sequencing
(13,565 .. 13,589) PCR Forward
Donor Template REV -> SNV (13,971 .. 14,070)
PCR Reverse (14,493 .. 14,517)



Donor Template SNV -> REV

Protospacer Sequence

SNV

INK2J00014R_MATR3_S85C_C06_AA
38,004 bp

5'
3'

GGGTTTGTCTTGGGCTGCAGCCGCTGCCGCGCTTCTCGCCAGCGCCGTTGCTGCGGGGGATTGTGGGAGTCTCCGCGTCCC GC

CCCAAACAAGAACCCGACGTCGGCGACGGCGGGCAAGAGCGGTGCGGGCAACGACGCCCCCTAACACCCCTCAGAGGCGCAGGGCG

85

MATR3 >

MATR3-201 >

TCGCTGGGAGAGAGGTACCTCTCCTTTTCCCTCTCCCTTTCCCTAAGGTAGGCGTGAAGCGGGTAAGAGTCGGGGTCGGGTGGCT

AGCGACCCTCTCTCCATGGAGAGGAAAAGGGAGAGGGAAAAGGGATTCCATCCGCACTTCGCCATTCTCAGCCCCAGCCCACCGA

170

MATR3 >

MATR3-201 >

GGGGTTCTCCGTGTCCGCCGGGAGGGGACAACGACGGCGACAGGGGCTGCGGGGAGCCGGCGGCAGCCCTTTCTTGCTCGCTCC

CCCCAAGAGGACAGGGCGGCCCTCCCTGTTGCTGCCGCTGTCCCGACGCCCTCGGCCGCGCGCGGAAAGAACGAGCGAGG

255

MATR3 >

MATR3-201 >

CGCTCTGCCTCCCTCCGCGTTGCGTATGTGAGCCGCTGATCGGGCGGCCGCGCATGTTAGGAGCGCAGTGGCGGGCGCAACCAGCCT

GCGAGACGGAGGGAGGCGCAACGCATACACTCGGCGGACTAGCCGCCGGCGGTACAATCCTCGCGTCACCGCCGCGTTGGTCGGA

340

MATR3 >

MATR3-201 >

TCTAGGGCGGGCGGAGGTGAGCGGTCCGGGAGGGAAACACGCGGCCGGCCAAGGGCCAGGGTGCGGCGGGAGATTTTGGGTGAAG

AGATCCC GCGCCTCCACTCGCCAGGCCCTCCCTTTGTGCGCCGGCCGGTTCCCGGGTCCCACGCCGCCCTCTAAAACCCACTTC

425

MATR3 >

MATR3-201 >

AGGTGCGCTGACCGGCCGAGCTTCTGCGCGTCCTGGGCTCGTTGTGGGCGGGGGCGGGACGACTAGCCCGTTACACGCGGGCCG

TCCACGCGACTGGCCGGCTCGAAGGACGCGCAGGACCCGAGCAACACCCGCCCCCGCCCTGCTGATCGGGCAATGTGCGCCCGGC

510

MATR3 >

MATR3-201 >

CGGCGCTGAGGGGGAGGGAGGAGCTCGCTCGAGGCCTGAGGGACAGACTGTACACTGGGGGCTTGCCGTTTGAGGAGGATGGTTA

GCCGCGACTCCCCCTCCCTCCTCGAGCGAGCTCCGGACTCCCTGTCTGACATGTGACCCCGAACGGCAAACCTCCTCCTACCAAT

595

MATR3 >

MATR3-201 >

AGATATCTAAGTCCTTGGGTAGCGCCAGTGCCAAATAACCCGTTTCGCTTTTTTTCTCTGAAAATGTTCCCCCAAAAATGGAGGAT

TCTATAGATT CAGGAACCCATCGCGGTACAGGTTTATTGGGCAAGCGGAAAAAAGAGACTTTTACAAGGGGGTTTTACCTCCTA

680

MATR3 >

MATR3-201 >

TTCGCAGACTCTGAAGAGCCTGCTTGTGTTGAGCAGCGTTTCTTTCTTTTCCCGGTGTCTCGGCCTTCACGCCGCTCCTTGCCCAT

AAGCGTCTGAGACTTCTCGGACGAACAACACTCGTCGCAAAAGAAAGAAAAGGGCCACAGAGCCGGAAGTGCGGCGAGGAACGGGTA

765

MATR3 >

MATR3-201 >

CGCCTCAGAGCGCCCCCTAAGACTCCC GGCCACACGCGCGCGCGCGCGCGGGCTTAGCTGGACATCAGAAACAATTCTCCCCG

GCGGAGTCTCGCGGGGGATTCTGAGGGCCGGGTGTGCGCGCGCGCGCGCGCCGCAATCGACCTGTAGTCTTTGTTAAGGAGGGGC

850

MATR3 >

MATR3-201 >

CCCCCATCGCGTAAAAATGGCCGAAAAATGAAACGTTAACGCTTGTTTTTTCGTA CTGCGTGGAAACAAGCCGCTGCA GTAC
GGGGGGTAGCGCATTTTTACCGGCTTTTTACTTTGCAATTGCGAACAAAAAGCATGACGCAGCACCTTGTTCCGGCGGACGTCATG

935

MATR3

MATR3-201

AGTGCGAGGCGGGTGATTTGCACTTGTTTAGTCAAGTCACCTCACATCCTTTTTCTCTTTATCAAAAATAGTATTAGTCCAGGTTTC
TCACGCTCCGCCCACTAAACGTGAACAAATCAGTTCAGTGGAGTGTAGGAAAAAGAGAAATAGTTTTATCATAATCAGGTCCAAG

1020

MATR3

MATR3-201

CTCCAGAGAGGATCGTGTGGTGTGGGACCTTCCGGTTTCCAGACAAAAGGGTTTTGGAGTACCGTGGTGTAGTCGCCGCATCGTTTC
GAGGTCTCTCCTAGCACACCACACCCTGGAAGGCCAAAGGTCTGTTTTCCAAAACCTCATGGCACCACATCAGCGGCGTAGCAAG

1105

MATR3

MATR3-201

TTTGCATTTTCGAGCTCTGTGCCATGTTCTGTGTTCCGGCATTACCGTGGATGAATATCCCCTAGGTGTTTATCCTGCTCTGTGGC
AAACGTAAAGCTCGAGACACGGTACAAGACACAAGCCGTAAATGGCACCTACTTATAGGGGATCCACAAATAGGACGAGACACCG

1190

MATR3

MATR3-201

CCTGTTCTGTGGAATATTCCTATTGGATCAGTTACAGTTTTTTAGCCAGATATTTCTAGAACGGTTATGGTGGTTCTGAAATGGC
GGACAAGACACCTTATAAGGATAACCTAGTCAATGTCAAAAAATCGGTCTATAAAGATCTTGCCAATACCACCAAGACTTTACCG

1275

MATR3

MATR3-201

TAGTCTTTTCGGGCGCGCTGGAATAATGTGAAGAATCGTTGATTTTCGTAGGTAGGGGTCACGAGATTTTGTATTGGTACTGCGTTC
ATCAGAAAAGCCGCGCGACCTTATTACACTTCTTAGCAACTAAAGCATCCATCCCCAGTGCTCTAAAACATAACCATGACGCAAG

1360

MATR3

MATR3-201

TGTGTTTTAAACCTTGGCTTAAGATTTCTGAATAGTCGGTAAAATACATTTTTCTCCCAGGGAAATCTAAACAGTTGACTATGCG
ACACAAAATTTGGAACCGAATTCTAAAGACTTATCAGCCATTTTATGTAAAAAGAGGGTCCCTTTAGATTTGTCAACTGATACGC

1445

MATR3

MATR3-201

GACAAAAATGATGTTTCAGGCTATTTTTAATAAATGTTTAAAAATTTCCCTTTAAAAACATTTCTTTACTAATGGCTCAGTCATCTA
CTGTTTTTACTACAAAGTCCGATAAAATTATTTACAAATTTTAAAGGGAAATTTTTGTAAAGAAATGATTACCGAGTCAGTAGAT

1530

MATR3

MATR3-201

CGCAGTCTATCGACGTTTTTACAGTATTGTTTTAAAAATCAAGAAAGGCTTGACATTTTCGTTGCAAAAACGCTCTGGATGATG
GCGTCAGATAGCTGCAAAAAGTGTACATAACAAAATTTTTAGTTCTTTCCGAACTGTAAAAGCAACGTTTTTTCGAGACCTACTAC

1615

MATR3

MATR3-201

CCTTTTCCACTTAAATAGAATGTTTTTGCAAACTCGAAATTAACAACATTTAAATACTGCATGAAGTTTCTTGGTTATGTAAGA
GGAAAAGGTGAATTTATCTTACAAAACGTTTGAGCTTTAATTTGTTGTAATTTTATGACGTA CTTCAAAGAACCAATACATTCT

1700

MATR3

MATR3-201

TTTGGAAAAGATCATTTAGCCAGATGTGTGTTGAAGTGCTTTAAATTTGTATTTCTTCTTTGCACTTAACAGTATATACTTAGA
AAACCTTTTCTAGTAAATCGGTCTACACACAACCTTCACGAAATTTAAACATAAAGAAGGAAACGTGAATTGTCATATATGAATCT

1785

MATR3

MATR3-201

ACATTACTTTGTACTTTACCCAGAGAAGTTTTGCTTTATCATCTTTATATATTTTTTCAGCCGTGTACAGCTTTTATATCACATTT
TGTAATGAAACATGAAATGGGTCTCTTCAAAGCGAAATAGTAGAAATATATAAAAAGTCGGCACATGTGCAAAAATATAGTGTA

1870

MATR3

MATR3-201

TGAACTAACTTGGAAAGGATTTAACTACCCTTGATCTGTGCATTTGTTTTAGTCTTTAAACATACTAATTTTTTTACTAATGCTTT
ACTTGATTGAACCTTCTTAAATTTGATGGGAAGTACACGTAACAAAATCAGAAATTTGTATGATTAATAAATGATTACGAAA

1955

MATR3

MATR3-201

TAGAGTTTGTAAACGCTAATATTACAAGTCAGTTAATGGTTTTTACTGAGGAGTGCAACGGTGGTGTTCGTATTTTTAGGAGCATCA
ATCTCAAACATTTGCGATTATAATGTTTCAGTCAATTACCAAAAATGACTCCTCACGTTGCCACCACAGCATAAAAATCCTCGTAGT

2040

MATR3

MATR3-201

CGTAGTTCAAATCCCTAATTTTTATAGAAGAGAAGGTTAAAGCCAGATAGGTCGTGACCAGTTGCAAATAGTAGCAGTGCTGTCA
GCATCAAGTTTAGGGATTAAAATATCTTCTTCCAATTTCCGGTCTATCCAGCACTGGTCAACGTTTATCATCGTCACGACAGT

2125

MATR3

MATR3-201

GTGTGGTCTACAGAGGTCTTGGATCTTTTTTCTCTGAAACAGGATCGCTCTGTTGCCAGACTGGAGTGCAGTGGTATGATCA
CACACCAGATGTCTCAGAACCTAGAAAAAAGAGACTTTGTCTAGCGAGACAACGGGTCTGACCTCACGTCAACATACTAGT

2210

MATR3

MATR3-201

GTGGCTCACGGCTCACAGCAGCCTCGACCTCCCAGGCTTAAGTAATCCTCCCACCTCAGCCTCCTGGGTAGCTGAGATCACAGGC
CACCGAGTGCCGAGTGTCTGTCGGAGCTGGAGGGTCCGAATTCATTAGGAGGGTGGAGTCCGAGGACCCATCGACTCTAGTGTCCG

2295

MATR3

MATR3-201

GCGCGCCACCACACCAAGCTAATTTTTGATCGTCTGTAGAGACGTGTTCTCACAAATATGGCCAGGCTGGTGTGAACTCTCGG
CGCGCGGTGGTGTGGTTCGATTAAAAAAGTACGAGACATCTCTGCACAAGAGTGTTATACCGGGTCCGACCACAACCTTGAGAGCC

2380

MATR3

MATR3-201

AGCTCTTAGATGTTGATTCAGACTCCTTCATAGTATAATAGGCTTAAATGGAAAGACTGTGCGTACAGGAATTTATCCTAAGGA
TCGAGAATCTACAACCTAAGTCTGAGGAAGTATCATATTATCCGAATTTTACCTTTCTGACACGCATGTCTTAAATAGGATTCTT

2465

MATR3

MATR3-201

AGTAATGTGTCAGATTTGCGTATATAAATTTAATATCAGTTATTAAGAATTTTTTTAAATTAATATTCAAGTTTTGGGAATC
TCATTACACAGTCTAAACGCATATATTTAAATATAGTCAATAATCTTAAAAAATTTTAAATTTATAAGTTCAAAAACCTTAG

2550

MATR3

MATR3-201

TGCTAATTCTGTTGTGAAAAGTGGAAATCTATACAGCCACTTAAAACAGTATCGTAGGGTGAAGAGTATGATGGGAAAATGGTAACG
ACGATTAAGACAACACTTTTACCTTTAGATATGTCGGTGAATTTTGTTCATAGCATCCACTTCTCATACTACCTTTTACCATTGC

2635

MATR3

MATR3-201

GTATACAGTTTTAACTGGAAAGGAAAATGTTGGAAAAGTCTAATGTCGTTTGATTGTTTTTTAAACGACAATGTAAACATGAAA
CATATGTCAAAATTGACCTTTCTTTTACAACCTTTTGACGATTACAGCAAACCTAACAAAAAATTTGCTGTTACATTTGTACTTT

2720

MATR3

MATR3-201

ATAGAGATATACCCCAAAATGTTTGCTCAGATGTTGGCATTGTTTACTCCCTGATGTTTTTCTGAATTTACCACGAGAAATAACA
TATCTCTATATGGGGTTTTACAAACGAGTCTACAACCGTAACAAATGAGGGACTACAAAAAGACTTAAATGGTGCTCTTTATTGT

2805

MATR3

MATR3-201

TCAACTTTTGTAAATGAGAGAAAAAATGAAAAACATATTTTGTAAATACTGTAAGTCTTAAAAATATTAGAGTCCTCTGTATTTT
AGTTGAAAACATTACTCTCTTTTTTACTTTTTGTATAAAACATTTATGACATTGACGAATTTTATAATCTCAGGAGACATAAAA

2890

MATR3

MATR3-201

TAAGCGAAATTGGCATAGACAAACTAGCTGCTTCAAGTCTGAAGTGAAGTACTGAGAAGTGACAGAAAGTAGTGCTTGTGTAA
ATTCGCTTTAACCGTATCTGTTTGATCGACGAAGTTCAGACTTCACTTTTTCATGACTCTTCACTGTCTTTTCATCACGAACACATT

2975

MATR3

MATR3-201

CATTTTGGATATTGGGTATAAGCAAACACAGGAATCAGAATATTCTTAGGCCAAAATGTTAAAATCATTATTATTGGAAATAGTA
GTA AACCTATAACCCATATTCGTTTGTGTCCTTAGTCTTATAAGAATCCGTTTTTACAATTTTAGTAATAATAACCTTTATCAT

3060

MATR3

MATR3-201

CTAATTAGCTTACAATATGAATTGCAGCCAAAGAATTGAATAATGGTTAGATGTTCTTAGAACATCTTTTTGTTAGGGATACTTG
GATTAATCGAATGTTATACTTAACGTCGGTTTCTTAACTTATTACCAATCTACAAGAATCTGTAGAAAAACAATCCCTATGAAC

3145

MATR3

MATR3-201

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TAAAATATATAGAGGAAATCAATCTTAATGTCATGTCGATAGGGTGTGAAGACCGTTGTCCAAGATTTTACCTACTAACGCCGG

3230

MATR3

MATR3-201

AGTGGCCCGTGATCCCAGCACATTAGGAGGCCAAGGCGGGCGGATCATCTGAGGTAAAGAGTTCTGAGACCAGCTTGCCCAACAT
TCACCGGGCACTAGGGTCGTGTAATCCTCCGGTTCCGCCCGCCTAGTAGACTCCATTTCTCAAGACTCTGGTCGAACGGGTTGTA

3315

MATR3

MATR3-201

GGCGAAACCCCATTTTCTACTAAAAATTACAAAAATTAGCCGGGCGTGGTGGCAGGCACCTGTAATGTAATCCCAGCTACTTGGGA
CCGCTTTGGGGTAAAGATGATTTTTAATGTTTTAATCGGCCCGCACCACCGTCCGTGGACATTACATTAGGGTTCGATGAACCTT

3400

MATR3

MATR3-201

GGGTGAGGGGAGGAGAAATCACTTGAACCCAGGAGGCGGAGGTAGCAGTTAGCCGAGGTGGCGCCACTGCATTCCAGCCTGGGCAA

CCCCTCCCTCCTCTTTAGTGAACCTGGGTCTCCGCCTCCATCGTCAATCGGCTCCACCGCGGTGACGTAAGGTCGGACCCGTT

3485

MATR3

MATR3-201

CAGAGCGGGACTCCATCTCAAAAAAAGTAAAGTGGATGATTGACTTAACATTTGGGATGGACAGTGCTAAGTTTGTGGGATGG

GTCTCGCCCTGAGGTAGAGTTTTTTTTCATTTACCTACTAACTGAATTGTAACCCCTACCTGTCACGATTCAAACAACCCCTACC

3570

MATR3

MATR3-201

ATTGGAAGGGTTATAGGCTGGGAGTGTAGTTTTGCCATTTCTGTATATGTGGTTGGTTATTCTAAGGCACAACGCTGTCCAAGA

TAACCTTCCCAATATCCGACCCTCACATCAAAACGGTAAAAGACATATACACCAACCAATAAGATTCCGTGTTGCGACAGGTTCT

3655

MATR3

MATR3-201

AATAAAGTGCTGTAATTTATAATTATTAGCTATGTAGCAAACCTTTCTCATTGGATCATTAGGATTAAGGGCTCTGAAGTTCTTG

TTATTTACGACATTAAATATTAATAATCGATACATCGTTTTGAAAGAGTAACCTAGTAATCCTAATTTCCCGAGACTTCAAGAAC

3740

MATR3

MATR3-201

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TATTTTCAAATACACATCTTTTAAATTACCTATTAATTTTCATTTTGTCTTTTGTTCGGATACCCAACCTCAAATCTATACATGG

3825

MATR3

MATR3-201

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AAATTTCCCAAAAATACACATTAAATTTTTTAACTCATATTCACAATCCAAAATTGCGTAAAGATAATATTAGGATAAACATTAT

3910

MATR3

MATR3-201

CAGTAAAAGTTACATGATAAAGTGCTGTTATCTGACCTAACCTGAATATAATTTACTGTGGCACTTCTGTGTGGATGGAGTG

GTCATTTTCAATGTACTATTTACGACAATAGACTGGATTGGACTTATATTAATAATGACACCGTGAAGACACACCTACCTCAC

3995

MATR3

MATR3-201

CGGAGTGCCTTTGATGTGATGTATAATTTCCAGTTGTACATCAAGCCCTAATGTTCTCTGTATAGATAAAGCTCAAGGCTCTTT

GCCTCACGGAAACTACACTACATATTAAGGTC AACATGTAGTTCGGGATTACAAGAGACATATCTATTTTCGAGTTCGGAGAAA

4080

MATR3

MATR3-201

GGAAGTGGAAAATAAAAAAGTGAAGTAGTAATGAAAGCTTAGGTTTGAAAAATTTTAAAGCTATTCCAAAATTTAAAGTATGCTT

CCTTCACCTTTTATTTTTCACTTCATCATTACTTTTGAATCCAAAATTTTTTAAATTTTCGATAAAGGTTTTAAATTTTCATACGAA

4165

MATR3

MATR3-201

GCTCCCCACCCACCAAACCTTAAAAACATCTTATCTGACATTCTTTAATGTGGTTTCAGGCAGAAACAGGTTAGTAGGAAAACA

CGAGGGGTGGGTGGTTTTGGAATTTTTGTAGAATAGACTGTAAGAGAAAATTACACCAAGTCCGTCTTTGTCCAATCATCCTTTTGT

4250

MATR3

MATR3-201

AGAGGGGAGCTTGCCTGTGGAGAAGGAGAGAGTAGTTGCAGATGGGTAAGAAAAAGTAAAAAGCAGAGTGCCTATGGTAAATGTCTT
TCTCCCTCGAACGGACACCTCTTCTCTCTCATCAACGTCTACCCATTCTTTTCATTTTCGTCTCACGGATACCATTTACAGAA

4335

MATR3

MATR3-201

AGTGGGCCAGCAGTAAATGCAGCAAGTATGGAAAGTAGTCATTTAATTAATATTAGGGAGCAGTATTATCTGCATTTACTTTCATG
TCACCCGGTCGTCAATTTACGTCGTTTCATACCTTTCATCAGTAAATTAATTATAATCCCTCGTCATAATAGACGTAAATGAAGTAC

4420

MATR3

MATR3-201

AAGATGCATAACTTTTCAGATCTTTTAGGATGATGTGTTTGGTTTTTTTCTCTCTTTGTGAGGATTATTAGGATATTAACCGTCCC
TTCTACGTATTGAAAGTCTAGAAAATCCTACTACACAAACCAAAAAAGGAGGAAACACTCCTAATAATCCTATAATTGGCAGGG

4505

MATR3

MATR3-201

TCTTAACACACGGGAACCTATACCATATGTGAAAATTAAGAGTCAATTTTGGAGCACTCAACTTAAGCAGTAGTTGGGGAAAAGA
AGAATTGTGTGCCCTTGGATATGGTATACACTTTTAATTTTCAGTTAATAAACTCGTGAGTTGAATTCGTCAATCAACCCCTTCT

4590

MATR3

MATR3-201

ATAATGTCAAAGAAATACAAACATTTGGCTGGGTGCAGTGATTCACACCTGTAATCCAGCACTTTGGGGGCTGAGGTGGGCAGA
TATTACAGTTTCTTTATGTTTGTAAACCGACCCACGTCACCTAAGTGTGGACATTAGGGTTCGTGAAACCCCGACTCCACCCGTCT

4675

MATR3

MATR3-201

TCACCTCAGGCCAGGAGTTCGAGACCAACCTGGGCAACATACGGAAAACCCCGTCTCTACTAAAAATACAAAAATTAGCGGGTCG
AGTGAAAGTCCGGTCTCAAGCTCTGGTTGGACCCGTTGTATGCCTTTTGGGGCAGAGATGATTTTTATGTTTTTAATCGCCAGC

4760

MATR3

MATR3-201

TGATGGCGCGTTCCTGTAATTCAGCTGTTGGAGACGCTGAAGCAGAATTGCTTGAACCTGGGAGGCAGGAAAGTTGCAGTGAGGCG
ACTACCGCGCAAGGACATTAAGGTGACAACCTCTGCGACTTCGTCTTAACGAACTTGGACCCCTCCGCCTTCAACGTCACTCCGC

4845

MATR3

MATR3-201

AGATCGTGCCACTGCACTCCAAGGCTGGTGACAGAGCAAGACTGTCTCAAAAAAGAAAAGAAACACAAATATTTGAACTCCAATA
TCTAGCACGGTGACGTGAGGTTCCGACCACTGTCTCGTCTGACAGAGTTTTCTTTCTTTGTGTTTATAAACTTGAGGTTTAT

4930

MATR3

MATR3-201

TTCTTTGTGTGTAGAAAAATCTAATGGATAATTAAGACTAGAGCAGAGAGAAAAGCCTAGGAGTTGAGAGATTTTTAGATACGTG
AAGAAACACACATCTTTTTAGATTACCTATTAATTTTTGATCTCGTCTCTCTTTTTCGGATCCTCAACTCTCTAAAAATCTATGCAC

5015

MATR3

MATR3-201

ACTGAAAAGATTGGAAAAGGCTATCAGTTTTAATGCTTGTGTCTGTCTTTGTGTGGGCCATGGTATTTTTGGAAGAGCACCATGGA
TGACTTTTCTAACCTTTTCCGATAGTCAAAATTACGAACACAGACAGAAAACACACCCGGTACCATAAAAACCTTCTCGTGGTACCT

5100

MATR3

MATR3-201

GGAGGGAAGTTTTGCAGTTTTGCACCAAGGGACACCAAGAAACAGCGTTGTTCTTGGTAATGGCAAGAAATTGAAAAACAACCTTAAA
CCTCCTTCAAAACGTCAAAACGTGGTTCCTGTGGTCTTTGTGCGCAACAAGAACCATTACCGTTCCTTTAACTTTTGTGTAATTT

5185

MATR3

MATR3-201

TGTTTCATCATCTGCAGAATAAAGTACATGTGCATACATAATGATACCTATATTGCAGTGAAAATGTAGGTTTAACTCACAATTGT
ACAAGTAGTAGACGTCTTATTTTCATGTACACGTATGTATTACTATGGATATAACGTCACTTTTACATCCAAATTGAGTGTTAACA

5270

MATR3

MATR3-201

GGATAAATCAGTTTTTAAAAGCAAGTCAGAACAGTACATTTTAAAGTCAATTTGCATGAAGTTCAGAAATGCAAAAAATAACACTTT
CCTATTTAGTCAAAAATTTTCGTTTCAGTCTTGTTCATGTAAAATTCAGTTAAACGTACTTCAAGTCTTTACGTTTTTATTGTGAAA

5355

MATR3

MATR3-201

TTAAGGGTACATACATTAAGTAGTCAAACCTTAAACACAAGGGGAGGGAGTCGTTGGAAAATTGCTATGTAGATTTATTTCCAAAAGT
AATTCCTCATGTATGTAATTCATCAGTTTGAATTTGTGTTCCCTCCCTCAGCAACCTTTAACGATACATCTAAATAAAGGTTTCA

5440

MATR3

MATR3-201

CTCGTTAATGTTTTGTTTCGTATTTTTATATACACTGGTTTTGTATAATACATTGAATGATTA AAAAGGGGATGCTGGGCCTTGAGA
GAGCAATTACAAAACAAAGCATAAAAATATATGTGACCAAACATATTATGTAACCTACTAATTTTTCCCTACGACCCGGAACTCT

5525

MATR3

MATR3-201

AAATAACTGGTATTACATGAAATGACAGAGGGATGCCTCCCAGCTAATAATTTTATTTACACAAGCATTGAGTAGTTTCTGTAAA
TTTATTGACCATAATGTACTTTACTGTCTCCCTACGGAGGGTGCATTATTAATAAATGTGTTTCGTAACCTCATCAAAGACATTT

5610

MATR3

MATR3-201

TGGAATAGTAAGCAGACGTTTCTGTAAGGTGTTTGGTTATGTTTGGGGAAAAGGTTTAGAGAAGTAGAATGGAACCAACACATGA
ACCTTATCATTTCGTCTGCAAAGACATTCCACAAACCAATACCAACCCCTTTTCAAATCTTTCATCTTACCTTGGTTGTGTACT

5695

MATR3

MATR3-201

AAGGCAGTGAAAATTATATGTGAGGCAGGGCACAGTGGTTCATGTCTATAACCTCAGCACTTTGGGAGGCTGAGGGAGGAGGATC
TTCCGTCACCTTTTAAATATACACTCCGTCCTGTCACCAAGTACAGATATTGGAGTCGTGAAACCCCTCCGACTCCCTCCTCCTAG

5780

MATR3

MATR3-201

ACTTGAACCCAGGAGTTCATGACCAGCTCATGCAACGTAGTGAGACCTTGTCTCTACTAAAAATGTTAAAAATTAGTCGGGTATA
TGAACCTGGGTCTCAAGTACTGGTCGAGTACGTTGCATCACTCTGGAACAGAGATGATTTTTACAATTTTTAATCAGCCCATAT

5865

MATR3

MATR3-201

GTGGTGCATGCCTGTGGTCCCTGCTGAGACCAAGGAGGATCACTTGAGCCCAAGAGATTGAGTCTGCAATGAGCCAAGATTGTGC
CACCACGTACGGACACCAGGGACGACTCTGGTTCCTCCTAGTGAACCTCGGGTCTCTAACTCAGACGTTACTCGGTTCTAACACG

5950

MATR3

MATR3-201

CACTGCACTGGGCAACAGAGGAAGACCCCTGTCTTGAAAAAGGAAATCGTAGTGTGGATTTTCATGTGGTAAGTGGTAGGGAGTAGT
GTGACGTGACCCGTTGTCTCCTTCTGGGACAGAACTTTTTCTTTTAGCATCACACCTAAAGTACACCATTACCCATCCCTCATCA

6035

MATR3

MATR3-201

AGGTTTTTGGAGCCAGGAGAGTGTGAAATGAGTGATGTTTTAGGTTGTTTTATGTTGAAAGGTGATGAGGTGTGAGCTTTGATGCCA
TCCAAAAACTCGGTCCTCTCACACTTTACTCACTACAAAAGTCCAACAAATACAACCTTTCCACTACTCCACACTCGAAACTACGGT

6120

MATR3

MATR3-201

GGAGGCTAGCTAAAAAGCAGGAGGACTAAGATTATGGCAGAGAGAATAGAAAGGTAAGATCTATGGCCATACCACCCCTAAACGCA
CCTCCGATCGATTTTTCGTCCTCCTGATTCTAATACCGTCTCTTATCTTTCCATTCTAGATACCGGTATGGTGGGATTTGCGT

6205

MATR3

MATR3-201

CCTGATTTTCGTCTGATCTTGGAAAGCTAAGCAGTGTGGGCCTGGTTAGTGCTTGGATGGGAAACAGGTTAAGGATGCAGGGTGAA
GGACTAAAGCAGACTAGAACCTTCGATTCGTCAACCCGGACCAATCACGAACCTACCCTTTGTCCAATTCCTACGTCCCCTT

6290

MATR3

MATR3-201

GGGTGATTTAAACACAGGTTGGCAATACAGAATGAAGAAGGAAGATGTTAATTTTTCCACTTTTACTAGAATTACTGCAATATA
CCCCTAAATTTGTGTCCAACCGTTATGTCTTACTTCTTCTTCTACAAATTAAGGTTGAAAATGATCTTAATGACGTTATAT

6375

MATR3

MATR3-201

GATAGTGATTGTTCTTTAGCTTGTCTGTTGAAAGTTACTACCAGTTGGCTCACACCTGTAATCCCAGCACTTTGGGAGGCCAAG
CTATCACATAACAAGAAATCGAACAGACAACCTTTCAATGATGGTCAACCGAGTGTGGACATTAGGGTCGTGAAACCTCCGGTTC

6460

MATR3

MATR3-201

GTGGGTGAATCACAAGGTCAGGAGTTCGAGACCAGTCTGGCCAACATGGTGAAACCTTGTCTCTACTAAAAAATACAGAAAATTT
CACCCACTTAGTGTTCAGTCCTCAAGCTCTGGTCAGACCGGTTGTACCCTTTGGAACAGAGATGATTTTTTATGTCTTTTAAA

6545

MATR3

MATR3-201

GCCAGGTGTGGTGGTGTGCACCTGTAACCCCAAGCTACTCCAGAGGCTGAGGCAGGAGAATCACGGGAACCCGAGAGGCAGGAGGTT
CGGTCCACACCACCACACGTGGACATTGGGGTCGATGAGGTCTCCGACTCCGTCTTCTTAGTGCCCTTGGGCTCTCCGCCTCCAA

6630

MATR3

MATR3-201

GCAGTGAGCCAAGATCACGCCATTGCACTCCAGGCCTGGCAACTGTGCGAGACTCTGTCTCAAAAAACAAAAGTTACTACCAGTCT
CGTCACTCGGTTCTAGTGCGGTAACGTGAGGTCCGGACCGTTGACACGCTCTGAGACAGAGTTTTTTGTTTTCAATGATGGTTCAGA

6715

MATR3

MATR3-201

TTAAGTCTGTTTTTGAAGCTGATTCCTGGTGACCAGTATGACATTAAGTTGATACATGAAAGAGACTACGGTGCAGATAAAAA
AATTCAGACAAAAACTTTTCGACTAAGGACCACTGGTCATACTGTAATTTCAACTATGTACTTTCTCTGATGCCACGTCTATTTTT

6800

MATR3

MATR3-201

GTTTATAAGCTCTTTATTCATTTGTCTTTGGATCTCAGTCTTTTTGCCTCTAAAAAGTTTTTCTCATCTAAAAATAAAGAAAAATA
CAAATATTCGAGAAATAAGTAAACAGAAACCTAGAGTCTAGGAAAACGGAGATTTTTCAAAAAGAGTAGATTTTTTATTTCTTTTTAT

6885

MATR3

MATR3-201

GATTTTACCTTCTTAGTTTTATGAGGATCAGATTATACCAAATGAGATGATTACTACGGTGCTGTGTGTCAGACACTATTTTTAAA
CTAAAATGGAAGAATCAAAAATACTCCTAGTCTAATATGGTTTACTCTACTAATGATGCCACGACACACAGTCTGTGATAAAAATTT

6970

MATR3

MATR3-201

TGTTTTATTTAGACTAATTTATTAAGTCTTTTTGAGTCAGAGTCTCACTCTGTCAACCCAGGCTGCAGTGGCTCACTGCAACCTCT
ACAAAATAAATCTGATTAAATAATTCAGAAAACTCAGTCTCAGAGTGAGACAGTGGGTCCGACGTCACCGAGTGACGTTGGAGA

7055

MATR3

MATR3-201

GCCTCCAGGGTTCAAGTGATTCTTCTGCCTCAGCCTCCCCAGTAGCTGGGATTACAGGCACATGCCACCACACCTGGCTGATTTT
CGGAGGTCCCAAGTTCACCTAAGAAGACGGAGTCGGAGGGGTTCATCGACCCTAATGTCCGTGTACGGTGGTGTGGACCGACTAAAA

7140

MATR3

MATR3-201

TGGTGTGTTTTGTTGTTTTGAGACAGAGTTTTGCTCTTGTGCCCAGGCTGGAGTGCAATGGCATGATCTCAGCTCACTGCAACCTC
ACCACAAAACAACAAAACCTCTGTCTCAAAACGAGAACAACGGGTCCGACCTCACGTTACCGTACTAGAGTTCGAGTGACGTTGGAG

7225

MATR3

MATR3-201

CGTCTTCTGGGTTCAAGTGATTCTCCTGCCTCAGCCTCCCGAGTAGCTGGGATTACAGGCGCCTGCCACCACACCTGGCTCTTTT
GCAGAAGACCCAAGTTCACCTAAGAGGACGGAGTCGGAGGGGTTCATCGACCCTAATGTCCGCGGACGGTGGTGTGGACCGAGAAAA

7310

MATR3

MATR3-201

TTGTATTTTTGGGTAGAGACAGGGTTTTCCCATGTTGGCCAAGCTGGTCTCGAACTTGTGGCCTTAAGTGATTCTCCACCTCAG
AACATAAAAACCATCTCTGTCCCAAAGGGGTACAACCGGTTTCGACCAGAGCTTGAACACCGGAATTCACCTAAGAGGGTGGAGTC

7395

MATR3

MATR3-201

CTTCCCAAAGTGCTAGGATTACAGCCATGAGCCACTGTGCCTGGCCTAATTTATCGAGTCTTTATGGCCTTATGAAGTAGGTATT
GAAGGGTTTTACGATCCTAATGTCCGCTACTCGGTGACACGGACCGGATTAATAGCTCAGAAATACCGGAATACTTCATCCATAA

7480

MATR3

MATR3-201

ATTTTTATTTCCCAACCACCTTTTTGGCTCAAGGTCACACAGCTGTTTGTAAATAGAACCAGGATTCACACGAAGGCTTTTTGGGCC
TAAAAATAAAGGGTGGTGGGAAAAACCGAGTTCCAGTGTGTGACAAAACATTATCTTGGTCCCTAAGTGTGCTTCCGAAAAACCCGG

7565

MATR3

MATR3-201

CCCAAATTCAGTATGTATGAAATAGTTGTAGAAATGTTTATGGAAGTCAAGAGAATAGGGCTCTTAGGGATACAGAATGGAGCC
GGGTTTTAAGTCATACATACTTTATCAACATCTTTACAAATACCTTCAGTTCTCTTATCCCGAGAATCCCTATGTCTTACCTCGG

7650

MATR3

MATR3-201

TTTTTCTTTATTTGAGACAGAGTCTCACTCTGTACCCAGGCTGGAGTACAGTGGCACAATCTTGGCTCACTGCAGCCTCCACC

AAAAAAGAAATAAACTCTGTCTCAGAGTGAGACAGTGGGTCCGACCTCATGTACCCGTGTTAGAACCAGGTGACGTCGGAGGTGG

7735

MATR3

MATR3-201

TCCCGGGTTCAAGAGATTCTCCTGCCTCAGCCTCCCAAGTAGCTGGGACTACAGGCGTGTGCCACCACACCCGGCTAATTTTTGT

AGGGCCCAAGTTCTCTAAGAGGACGGAGTCGGAGGGTTCATCGACCCTGATGTCCGCACACGGTGGTGTGGGCCGATTAAAAACA

7820

MATR3

MATR3-201

ATTTTTTAGTAGAGATGGGGTTTTAGCGTATTGGCCAGGCTGGTCTCGGACTCCTGACCTTAAAGTGATCCTCTCGCCTCGGCCT

TAAAAAATCATCTCTACCCCAAAGTCGCATAACCGGTCCGACCAGAGCCTGAGGACTGGAATTTCACTAGGAGAGCGGAGCCGGA

7905

MATR3

MATR3-201

CCCAAAGGGCTGGGATTACAGGTATAAGCCACCGCGCCAGCCAGAATGGAGCCTTGAAAGAAATCACTGATTTTTGCTTAAGCA

GGGTTTCCCGACCCTAATGTCCATATTCGGTGGCGCGGGTCCGGTCTTACCTCGGAACCTTCTTTAGTGACTAAAACGAATTCGT

7990

MATR3

MATR3-201

GAGAAGAAAGTAAAGAGCCAAGTTTATGTCGTAGTTCAAATAGACAATGAACATCATCAGGTACACGGGGTAACTTTCTATCTTG

CTCTTCTTTTCAATTTCTCGGTTCAAATACAGCATCAAGTTTATCTGTTACTTGTAGTAGTCCATGTGCCCCATTGAAAGATAGAAC

8075

MATR3

MATR3-201

TAATACGGGTTTACTTCATCAATTCTGTGTAGTTCTAATCTGAAACTATTTCTTGCCTGATTGAAGGTCCTGGGAAAAATTTT

ATTATGCCCAAATGAAGTAGTTAAGACACATCAAGATTAGACTTTGATAAAGAACGGACTAACTTCCAGTGACCCTTTTTTAAAA

8160

MATR3

MATR3-201

AAACCTAGGAAGAAGACAGTATTATTCCAGGTCTGAGTGGGAATTTCTTACACTGGTTAACAAGTAGTTTTCTGTCTTCTCAGCA

TTTGGATCCTTCTTCTGTCATAATAAGGTCCAGACTCACCTTAAAGAATGTGACCAATTGTTTCATCAAAAGACAGAAGAGTCGT

8245

MATR3

MATR3-201

GCTGACGCCACTCTGCAACATTCTTGTCAATTCATTAGCCTAAGGATCAAGAAGTGGACTAAAAATTGACTTCACGTCTGTTAGAT

CGACTGCGGTGAGACGTTGTAAGAACAGTAAGTAATCGGATTCTAGTTCCTCACCTGATTTTTAACTGAAGTGCAGACAATCTA

8330

MATR3

MATR3-201

GGATTAAGAACAGTGGTCTTAAAGCACTTGAAAATATTCATGCTTGTATTTAGCCTTCTGGCACTACACTTTTTTATCTTTTC

CCTAATTCTTGTCAACCAGAATTTCTGTAACCTTTTATAAGTACGAACATAAAGTCCGGAAGGACCGTGATGTGAAAAAATAGAAAAG

8415

MATR3

MATR3-201

TATTGTATGATGACACATGCTACTTTACCACACCCACCTAATTTTTGCATTTTTAGTAGAGACGGGGTTTCACCATGTTGGCCGG

ATAACATACTACTGTGTACGATGAAATGGTGTGGGTGGATTAAAAACGTAAAAATCATCTCTGCCCAAAGTGGTACAACCGGCC

8500

MATR3

MATR3-201

GCTGGTCTCAAACCTCCTGACCTCAGGTAATCTGCCCGCCTCGGCCTCCCAAAGTGCAGGATTACAGGTGTGAGCCACTGCGCCTG
CGACCAGAGTTTGAGGACTGGAGTCCATTAGACGGGCGGAGCCGGAGGGTTTCACGTCTAATGTCCACACTCGGTGACGCGGAC

8585

MATR3

MATR3-201

GCCTATTTTTAAAACTCTTAAGCCACTCAAGGTACATGCCATACTGAGATGAGATTGTGACACTCAAAAACATAGATTAGAGAGC
CGGATAAAATTTTTGAGAATTCGGTGAGTTCATGTACGGTATGACTCTACTCTAACACTGTGAGTTTTTGTATCTAATCTCTCG

8670

MATR3

MATR3-201

ATAAGATTTGAAAGTGGCTGAAACTCTAGGAAAAAATGTAGTTCTTCAGCATACTTCAAAAAACCCTTAAATGAAATAATTGT
TATTCTAAACTTTACCGACTTTGAGATCCTTTTTTACATCAAGAAGTCGTATGAAGTTTTTTTGGGAATTTACTTTATTAACA

8755

MATR3

MATR3-201

TACAAAATATGTTAGGAAATATTATATACACCATTAAAAATGAAAACCTTGTAGTACTTTTTAAAAATGGAAAATATGGTAAATTCCTT
ATGTTTTATACAATCCTTTATAATATATGTGGTAATTTTACTTTTGAACATCATGAAAATTTTACCTTTGATACCATTTAAGAAA

8840

MATR3

MATR3-201

ATAAAACCATTATAAAATTTAATAAATGAAGAAAAATTTAAATAGTAACTGAAACCTGTTCTTGAATTGAAAATAAGTTGGATGC
TATTTTTGGTAATATTTTAAATTTTACTTTCTTTTTAAATTTATCATTGACTTTGGACAAGAACTTAACTTTTTATTCAACCTACG

8925

MATR3

MATR3-201

TTGGTTTGAAAGTCTGACCGCAGGAATCAATATTTTTGTGTGATTTATGACAAAAATCAAGCAGCTACCTTCCAAATGGTGCTG
AACCAAACTTTCAGGACTGGCGTCTTAGTTATAAAAAACACACTAAATACTGTTTTTAGTTCGTGATGGAAGGTTTACCACGAC

9010

MATR3

MATR3-201

CTTTGAAATTAAGTACTGACAGTCAACTATGTCTGCCATCTATCAGTGACATAGGTTAAGACATTTTTACTAAATTGGTATTGTTGATT
GAACTTTAATGACTGTCAGTTGATACAGACGGTAGATAGTCACTGTATCCAATTCTGTAAAAATGATTTAACCATAACAACCTAA

9095

MATR3

MATR3-201

GCTACCTAAAACATATTTGGTATATTTTACATGAATAAGCTAATAAATGATCAAGGTGATTGGCCTTGATAGAACATTTGGAAA
CGATGGATTTTGTATAAACCATATAAAAGTGTACTTATTCGATTATTTACTAGTTCCTACTAACCAGGAACATCTTGTAAACCTTT

9180

MATR3

MATR3-201

ATCTGAGCATTTCTTGCAATTCAGAAGAGGAAAAATATAAGAACTGTAGTTTTCTAGCTGTTGCTTGTAAGTTTCAATGTGAAGT
TAGACTCGTAAAGAACGTTAAGTCTTCTCTTTTATATTCTTTGACATCAAAAAGATCGACAACGAACATTCAAAGTTACTTTCA

9265

MATR3

MATR3-201

TAAAATAATGTCATTATGAAGGTATTTTTTCCCTGAGTATCTCTAGTTTTATGGTTAAACCATAAATAATCTTTTCATAGTTTTTA
ATTTTATTACAGTAATACTTCCATAAAAAAAGGGACTCATAGAGATCAAAAATACCAATTTGGTATTTATTAGAAAAGTATCAAAAT

9350

MATR3

MATR3-201

TGGGTAAACCATCTCAAATTAGTTGTTTTTTTTTTTTTTAATTCTGACTACAAAGACTGAGAAGAGAAAAATTATTTTTTATTT
ACCCATTTGGTAGAGTTTAATCAACAAAAAAAAAAAAAAAAAATTAAGACTGATGTTTCTGACTCTTCTCTTTTAAATAAAAAATAAA

9435

MATR3

MATR3-201

GTTTTGTTTTTTGAGACGATGTTTGCTCTGTGGCCAGGCTGGAGTGCAGTGCCCAATCTCGGCTCAGTGCAGCCTCCATCTCC
CAAAACAAAAAACTCTGCTACAAACGAGACACCGGGTCCGACCTCACGTACGGGGTTAGAGCCGAGTACGTGCGGAGGTAGAGG

9520

MATR3

MATR3-201

CAGGTTCAAGTGATTCTCCGGCCTTAGCCTCCACGTAGGTGGGACTACAGGTGCGTGCCACCATGCCAGCTAATTTTTATATT
GTCCAAGTTCACCTAAGAGGCCGGAATCGGAGGGTGCATCCACCCTGATGTCCACGCACGGTGGTACGGGTCGATTAATAATAAA

9605

MATR3

MATR3-201

TTTAGTAGAGACGAGGTTTCACCATGTTGGCCAGGATGGTCTTGATCTCTTGACCTCGTGATCAACCCACCTCGGCTTCCCAAAG
AAATCATCTCTGCTCCAAAGTGGTACAACCGGTCTACCAGAACTAGAGAACTGGAGCACTAGTTGGGTGGAGCCGAAGGGTTTC

9690

MATR3

MATR3-201

TGCAGGGATTACAGGCGTGAGCCACTGCGCCCTGCCAGAGAAAAATTATTTAAAGGAGTGATTATCTCACACAGTTGAGAGCATA
ACGTCCCTAATGTCCGCACTCGGTGACGCGGGACGGTCTCTTTTTAATAAATTTCTCACTAATAGAGTGTGTCAACTCTCGTAT

9775

MATR3

MATR3-201

GCTGAAGATCCATGTGGAGTAGTAGATACCTCTTAGCATTTTGGGAGGTCAAGGCGGGAGGATTGCTTGAGCCCAGGAGTTCGAG
CGACTTCTAGGTACACCTCATCATCTATGGAGAATCGTAAAACCTCCAGTTCCGCCCTCCTAACGAACTCGGGTCTCAAGCTC

9860

MATR3

MATR3-201

ACCAGCCTGGCCAACATGGTGAAAACCCCTCTCTACCAAACAATGAAAAGTCCGAGCATGGTGGCATGTGTCTGTAGTCCC
TGGTCGGACCGGTTGTACCCTTTTGGGGGAGAGATGGTTTTGTTACTTTTGATCGGCTCGTACCACCGTACACAGACATCAGGG

9945

MATR3

MATR3-201

GGCTACTTGGGCTGAGGTGGGAGGATGGTTTTGAGCCTGGGAGGCAGAGGTTACAGTGAGCCTGGGCAATGCACTCCCAGGTGTGA
CCGATGAACCCGACTCCACCCTCCTACCAAACCTCGGACCTCCGTCTCCAATGTCACTCGGACCCGTTACGTGAGGGTCCACACT

10,030

MATR3

MATR3-201

TGCCATTCCACTCCAGCCTGGGCAATGAAGGAGTCAGACACTGTCTTTTTTTTTTAACTAAAAATCTTTTCATTTTTTTCTAAT
ACGGTAAGGTGAGGTGCGACCCGTTACTTCTCAGTCTGTGACAGAAAAAAAAAATTTGATTTTTTAGAAAAAGTAAAAAAGATTA

10,115

MATR3

MATR3-201

ACCTTCTAAGAAATTAAGTTAGCTTGCCTTATTTTTAGTAATTTCTGCTAGATATTACTCTGAAAGAATGACTAAGGACTTACCG
TGGAAGATTCTTTAATTTCAATCGAACGCGAATAAAATCATTAAAGACGATCTATAATGAGACTTTCTTACTGATTCTGAATGGC

10,200

MATR3

MATR3-201

GTAATCTTTAAGGAAATTTAGATCTGGAACAGCTGTTTGTCTTCTGTTCTCCGTGAATTTTCAGGGTATGTGAAATTTTTCAGAAA
CATTAGAAATTCCTTTAAATCTAGACCTTGTGACAAACGAAGACAAGAGGCCACTTAAAAGTCCCATACACTTTAAAAAGTCTTT

10,285

MATR3

MATR3-201

TATTTTAGTACTCTAGTTCTTTTAATTGGAGAAGAAAAAGCCAATAACAAAAATCAGATTCTCATGTAATGGGAGGTAGAATATT
ATAAAAATCATGAGATCAAGAAAATTAACCTCTTCTTTTTCGGTTATTGTTTTTAGTCTAAGAGTACATTACCCTCCATCTTATAA

10,370

MATR3

MATR3-201

AACTGAAACGTTTTCCTAACCATACATAGGGATGATACTCAGATTTGTTTAGATGTTGAATGTGAAGCTAACATTTTAAACAGCT
TTGACTTTGCAAAGGATTGGTATGTATCCCTACTATGAGTCTAAACAAATCTACAACCTTACACTTCGATTGTAAAAATTTGTCTGA

10,455

MATR3

MATR3-201

TAAAATTGTATCATAAAAATAATTTTAAGTTACAGTTTGTGTTTGGAGTTGCCTATAAAAAATGAATTTTAAAGCTAATTTGTTAAGAA
ATTTTAACATAGTATTTTATTAAAATTC AATGTCAAACAAAACCTCAACGGATATTTTACTTAAAAATTCGATTAAACAATTCTT

10,540

MATR3

MATR3-201

TTTGGTTATCGGGCCAGGCGTGGTGGCTCATGCCTATATAATCCCAGCACTTTGAGAGGACGAGGCAGGGGGATCACCTGAGGTC
AAACCAATAGCCCCGGTCCGCACCACCGAGTACGGATATATTAGGGTCGTGAAACTCTCCTGCTCCGTCGCCCTAGTGGACTCCAG

10,625

MATR3

MATR3-201

GAGACCAGCCTGACCAACATGGAGAAACCCCGTCTCTACTAAAAATACAAAATTAGCTGGAAGTGGTGGTGTGTCTGTCTGTAATTT
CTCTGGTCGGACTGGTTGTACCTCTTTGGGGCAGAGATGATTTTTATGTTTTAATCGACCTTCACCACCACACACAGACATTAAA

10,710

MATR3

MATR3-201

CAGCTACTTGGGAGGCTGAGGCAGGAGAATCACTTGAACCTAGGAGGCAGAGGTTGCAGTGAGCTGAGATCGTGCCATTGCATTC
GTCGATGAACCCCTCCGACTCCGTCTCTTAGTGAACTTGGATCCTCCGTCTCCAACGTCCTCGACTCTAGCACGGTAACGTAAG

10,795

MATR3

MATR3-201

CAGCCTGGGCATCAAGAGTGAAACTCCATCTGAAAAAAAAAAAAAAAAAAGAATTTGGTTATCAAGATTGTAGTAAATGGCATTTTGTG
GTCGGACCCGTAGTTCTCACTTTGAGGTAGACTTTTTTTTTTTTTTCTTAAACCAATAGTTCTAACATCATTTACCGTAAACAC

10,880

MATR3

MATR3-201

TAGTGAAATTTGTTGGTAATGTTGATAGTTTTAGGGGGGTGCAGGTGCTTTCTTTTTTGGAAAGTGAAGGGTTCTGCATTGATGGG
ATCACTTTAACACCCATTACAACATCAAAAAATCCCCCACGTCCACGAAAGAAAAAACCTTCACTTCCCAAGACGTAACCTACCC

10,965

MATR3

MATR3-201

CATTTACACTAGTATATAGAGATTTTAAATAGGTAAATTTGGATTTTGGATAATAAATGTTCTCCCAAAGCTACTATATTTAAATTT
GTAAATGTGATCATATATCTCTAAAATTTATCCATTTAACCTAAAACCTATTATTTACAAGAGGGTTTCGATGATATAAATTTTAA

11,050

MATR3

MATR3-201

GTTTTAACCTCTAGTGCAGTTTCCTATAGAAAAGGCAATTTTATAATTACAGGAAAAAACAATACAGTAAAAGGAGCTAATCTTTT
CAAAATTGGAGATCACGTCAAAGGATATCTTTCCGTTAAAAATATTAATGTCCTTTTTTTGTTATGTCATTTTCTCGATTAGAAAA

11,135

MATR3

MATR3-201

GTAAATCTTTAGTAAGTGTCTCCATATTGTGCTGCCTTTGCTAATAGGCAGTGGGGCCCATGTGAATGAGCCTTTAAAAGTGGCT
CATTTAGAAATCATTACAGAGGTATAACACGACGGAAACGATTATCCGTCACCCCGGGTACACTTACTCGGAAATTTTCACCGA

11,220

MATR3

MATR3-201

TGTACATCTTATGTTTCAGCATTGACATGATAGAGGAACTGTTTTTATTAATGCTTTTTTCAACAATGTTGCCACATCTGGTTTCTC
ACATGTAGAATACAAGTCGTAAGTGTACTATCTCCTTGACAAAAGTAATTACGAAAAAGTTGTTACAACGGTGTAGACCAAAGAG

11,305

MATR3

MATR3-201

CCAACTTTGTTCTAATAAAAACCATTTTTAAGAATTTGGTTTTATTTGTGGTTTAATCCAAAATCTAACTTAAGTTGCTTTTCACTA
GGTTGAAACAAGATTATTTTGGTAAAAATCTTAAACCAAATAAACACCAAATTAGGTTTTAGATTGAATTC AACGAAAAGTGAT

11,390

MATR3

MATR3-201

ATTTTACCCTAATATCCTTGATGGAGCTGCATTTTACGTTGAAACTGAGTATCTTAAAACTACTAAGGTGGTTATGGAATTACAC
TAAAATGGGATTATAGGAACTACCTCGACGTAAAATGCAACTTTGACTCATAGAATTTTGTGATTCCACCAATACCTTAATGTG

11,475

MATR3

MATR3-201

GTTGTCATGGGATTTACATTGTTTGTCTTGACTCTTTTCTGAGTTTTTCTGACATTCATTTTCTGTTTGTCTTAAGGTTATCCTT
CAACAGTACCCTAAATGTAACAAACAGAAGTGTGAGAAAAGACTCAAAAAGACTGTAAGTAAAAGACAAACAGAATTCCAATAGGAA

11,560

MATR3

MATR3-201

TACCTTTGCTTCTCTTAACTTTTTCTTTTTGTTGATCCACTGTTTTCTATGAGCTACCAAAAAATGTAATTCAGAGCTCTGTAG
ATGGAAACGAAGAGAATTGAAAAAGGAAAACAACACTAGGTGACAAAAGGATACTCGATGGTTTTTTACATTAAGTCTCGAGACATC

11,645

MATR3

MATR3-201

TCTAACAGTACATTTTCTTAAAAATATGGCCGTTTTAAAAATTTTAAACATAATTGTAATACCATTATATAATTTCTCTTAGGGA
AGATTGTCAGTGTAAAGGAATTTTATACCGGCAAAATTTTAAAAATTTGTATTAACATTATGGTAATATATTAAAGAGAATCCCT

11,730

MATR3

MATR3-201

AAAAATAATTCAAAAGACTGACTTTTTCAGTAATGCAAAGCTTTGGCTACAACATGAAGGTCAAAGCTGCAATTAATAACCCTGAT
TTTTTATTAAGTTTTCTGACTGAAAAGTCATTACGTTTTCGAAACCGATGTTGTAAGTTTCCAGTTTTCGACGTTAATTATTGGGACTA

11,815

MATR3

MATR3-201

ACTTCAACATTTTTATTTTTGAAAAACCCTCTAAAGGATTTGATTTGTAAAAATATGTGTGAAAATTTAGAGGGTCCACCACCATT
TGAAGTTGTAAAAATAAACTTTTTGGGAGATTTTCTAAACTAAACATTTTTATACACACTTTTAAATCTCCAGGTGGTGGTAA

11,900

MATR3

MATR3-201

TACATAGCATCTCAGCCGCCATTCTGTCTGGCATTATAAGACATATCAAAGAAACTTTTCATCTGAAGAAGTCCACTTATTCTCG
ATGTATCGTAGAGTCGGCGGTAAGACAGACCGTAAATATTCTGTATAGTTTCTTTGAAAGTAGACTTCTTCAGGTGAATAAGAGC

11,985

MATR3

MATR3-201

TCTTTATTAATCTTAAAGCTTAAGTAGTTTACATAGTGGATCTTGTCTAGAACTATTAATAGTTTCTTTGGTGTATTTTCTCAA
AGAAAATAATTAGAATTTTGAATTCATCAAATGTATCACCTAGAACAGATCTTGATAATTATCAAAGAAACCACATAAAAAGAGTTT

12,070

MATR3

MATR3-201

TTCATCTTTCTTGGTGTGCAAAAACATCTTCTGTAACCTCCAGCCACCTCTTATAGCATTCTGTGTCTTTTAAACTTGATTAT
AAGTAGAAAAGAACCACACGTTTTTGTAGAAGGACATTGAGGTCGGTGGAGAATATCGTAAAGACACAGAAAATTTTGAACATAA

12,155

MATR3

MATR3-201

ATCTATTTTTTAAATCCAGTCTAAATCTTTCTTGCCTGCAACTTTTTTATACTTCCCTTTGCCACTGTATTTGTCCATTGTATC
TAGATAAAAAATTTTAGGTCAGATTTAGAAAGAACGGACGTTGAAAAAATATGAAGGAAACGGTGACATAAACAGGTAACATAG

12,240

MATR3

MATR3-201

CTTGCTTTAATCTATCATTGGTGAAATTGATCCTGTAATAGACTTGTAACACTGATATTGTCTGGTTTTACTGTTAAAGTTTC
GAACGAAATTAGATAGTAACCACTTTAACTAGGACATTATCTGAACATTGATGACCTATAACAGACCAAAAATGACAATTTCAAAG

12,325

MATR3

MATR3-201

ACATATTAAGCTACCAGTGCTGAGTGTATTGGTGATCAAAAAATAGAAAATTTAAGCAATGCCTCATAGAATTCTGTACCAACA
TGTATAATTCGATGGTCACGACTCACATAACCACTAGTTTTTATCTTTTAAATTCGTTACGGAGTATCTTAAGACATGGTTTTGT

12,410

MATR3

MATR3-201

ACTTCAGATTTACCTCTGTATGTAGTTGTGATTATAAAATGTTTTCACTGAAGATGTTATGTATATCTTTCAACTAATATTTTAT
TGAAGTCTAAATGGAGACATACATCAACACTAATATTTTAAACAAAGTGACTTCTACAATACATATAGAAAAGTTGATTATAAAATA

12,495

MATR3

MATR3-201

GACAATCGTGATATAAAAGATTTGGAAATTTCTTATGTGACAGTTTTCTGAGGTACAACAATAATGATTTAAGAAAGAAAAAATTT
CTGTTAGCACTATATTTTCTAAACCTTTAAGAATACACTGTCAAAGACTCCATGTTGTTATTACTAAATCTTTCTTTTGTAAA

12,580

MATR3

MATR3-201

CATCTAGAAACACGTCTTGGGGGATCATAATCAGAACATAAATTTACCAGGTGATTTGGGCTATTCTTGTGAAAAGTTTACAGGA
GTAGATCTTTGTGCAGAACCCCTAGTATTAGTCTTGTATTTAAATGGTCCACTAAACCCGATAAGAACACTTTTTCAAATGTCTCT

12,665

MATR3

MATR3-201

AACTGTGTAACCAAGATCTCATTTTTCATTTTTACCTGTTTTGTGCTCTAGATGTGCTGTAGCCCTGAGCATTAAATGAGTACTGA
TTGACACATTGGTTCTAGAGTAAAAGTAAAAATGGACAAAACACGAGATCTACACGACATCGGGACTCGTAATTTACTCATGACT

12,750

MATR3

MATR3-201

TGGATGCTGATTTGGGGAGTTCCTTCTTTAAATCACCTGTATTTCTGTACCTAGGTTTTTTCTTGGGAGGGCTCCTATTCCTG
ACCTACGACTAAACCCCTCAAGGGAAGAAATTTAGTGGACATAAAGGACATGGATCCAAAAAAGAACCCTCCCAGGATAAAGGAC

12,835

MATR3

MATR3-201

TACTGACCAGAGTTAGTTCTCCTTACTTTAAAGACTAGATATGAAGTAAACACTGCCTGATGTAGGATGGTCAGTAAGAAGGCA
ATGACTGGTCTCAATCAAGAGGAATGAAATTTTCTGATCTATACTTCATTTGTGACGGACTACATCCTACCAGTCATTCTTCCGT

12,920

MATR3

MATR3-201

ATTAGTTGTATAACTTAAATTTGGGCAGCAATCCTTAAACTATAGGAAATGACTTATTTTTCTTATTCACATCTATCTTCACCT
TAATCAACATATTGAATTTAAACCCGTCGTTAGGAATTTGATATCCTTTACTGAATAAAAAAGAATAAGTGTAGATAGAAGTGGA

13,005

MATR3

MATR3-201

CAAATTGATTTTGCTGTATAAAGGTCTCAGCTATTATGTTTTGGTCTTATATCTTACATTAGGTACTTGAAACCTAAGCTTCATTT
GTTTAACTAAAACGACATATTTCCAGAGTCGATAATACAAACCAGAATATAGAATGTAATCCATGAACCTTTGGATT CGAAGTAAA

13,090

MATR3

MATR3-201

ACTTGTGATTTTACTTGGTTCTTTCTGATAGTGATAATAGGTCTCATTTTTCCAAAGCACAGTACAACCTGATTCATCTTTGACTTG
TGAACACTAAAATGAACCAAGAAAGACTATCACTATTATCCAGAGTAAAAGGTTTTCGTGTCATGTTGACTAAGTAGAAACTGAAC

13,175

MATR3

MATR3-201

CTGACCTTGATTTTTTTGTTTTTAGTCTTCTGGAACCTAAGCATCATACTATAGGGTGTATTTTTATTCTTCTAAAAGAAGAAAC
GACTGGAACATAAAAAACAAAAATCAGAAGACCTTGAATTCGTAGTATGATATCCACATAAAAAATAAGAAGATTTTCTTCTTTG

13,260

MATR3

MATR3-201

CCATCTATATTTTTACTGAAATTTTGATGTACTCAGACATCTAACCTTTCAATTTACATGTTTTTAAACTCAGTATGAAAGTCCC
GGTAGATATAAAAAATGACTTTAAACTACATGAGTCTGTAGATTGGAAGTTAAATGTACAAAAATTTGAGTCATACTTTTCAGGG

13,345

MATR3

MATR3-201

TTTAATAGTTAAGCTTTAGCATGAAATACTACTTTTTAAATATCTATATGCAGGCTCTGCATACATCAGGAATCTGTTTTAAGATA
AAATTATCAATTCGAAATCGTACTTTATGATGAAAAATTTATAGATATACGTCCGAGACGTATGTAGTCCTTAGACAAATTTCTAT

13,430

MATR3

MATR3-201

TGTAATAAATTCCTTGTAAGTTTGAGATCTTAAATGTTTTTTTTTAAATCAACATGATGCATAAGTTTTTTTTTCTTAAAAAAA
ACATTATTTAAGGAACATTCAAACCTCTAGAATTTACAAAAAATAAATTTAGTTGTAAGTACTACGTATTCAAAAAAAGAATTTTTTTT

13,515

MATR3

MATR3-201

PCR Forward

GAGTTGCTGCTGGTTCTCAGCTTG

CGGCATCTGCTTAAAGGGATTTATGACTAAAATTGCTTATTTTTTCTACAGAGTTGTCTGCTGGTTCTCAGCTTGAAGAAGATTCT
GCCGTAGACGAATTTCCCTAAATACTGATTTTAAACGAATAAAAAGATGTCTCAACAGACGACCAAGAGTCTGAACCTTCTTCTAAGA

13,600

MATR3

MATR3-201

GCAGTCCTTATTGATCCTTTTTCTTGGCGTTACCATTTTTGAAGCAAAGTTAACCTAGCTTTCTAGTTTGAGCTTTCTTTTTGGC
CGTCAGGAATAACTAGGAAAAAAGAACC GCAATGGTAAAACTTCGTTTCAATTGGATCGAAAGATCAAACCTCGAAAGAAAAACCG

13,685

MATR3

MATR3-201

CGTCTTTAAAAAATTTTTTTTTTAAATCTATAAAATAGACAAGAGCTAGTTCTACAATGTCCAAGTCATTCCAGCAGTCATCTC
GCAGAAATTTTTTAAAAAATAATTAGATATTTTATCTGTTCTCGATCAAGATGTTACAGGTTTCAGTAAGGTCGTCAGTAGAG

13,770

MATR3

MATR3-201

M S K S F Q Q S S

ENSE00003774855

MATR3-201

TCAGTAGGGACTCACAGGGTCATGGGCGTGACCTGTCTGCGGCAGGAATAGGCCTTCTTGCTGCTGCTACCCAGTCTTTAAGTAT
AGTCATCCCTGAGTGTCCCAGTACCCGCACTGGACAGACGCCGTCTTATCCGGAAGAACGACGACGATGGGT CAGAAATTCATA

13,855

MATR3

MATR3-201

L S R D S Q G H G R D L S A A G I G L L A A A T Q S L S M

ENSE00003774855

MATR3-201

Sanger Sequencing

GGTACTGCACGCCTTGCTAG

GCCAGCATCTCTTGGAAAGGATGAACCAGGGTACTGCACGCCTTGCTAGTTTAAATGAATCTTGGAAATGAGTTCTTCATTGAATCAA
CGGTCGTAGAGAACCCTTCTACTTGGTCCCATGACGTGCGGAACGATCAAATTACTTAGAACCTTACTCAAGAAGTAACCTTAGTT

13,940

MATR3

MATR3-201

P A S L G R M N Q G T A R L A S L M N L G M S S S L N Q

ENSE00003774855

MATR3-201

gRNA Protospacer

TTGCAGT G TATATTTAACAT

CAAGGAGCTCATAGTGCACCTGCTTTCTGCTAGTACTTCTTCCCATAATTTGCAGTCTATATTTAACATTGGAAGTAGAGGTCCAC
GTTCCCTCGAGTATCACGTGACAGAAGACGATCATGAAGAAGGGTATTAACCGTCA GATATAAATTGTAACCTTCATCTCCAGGTG

14,025

MATR3

MATR3-201

Q G A H S A L S S A S T S S H N L Q S I F N I G S R G P

ENSE00003774855

MATR3-201

Donor Template SNV -> REV

Protospacer Sequence

PAM

SNV

TCATGAAGAAGGGTATTAACCGTCA GATATAAATTGTAACCTTCATCTCCAGGTG

Donor Template REV -> SNV

TCCCTTTATCTTCTCAACACCGTGGAGATGCAGACCAGGCCAGTAACATTTTGGCCAGCTTTGGTCTGTCTGCTAGAGACTTAGA
AGGGAAATAGAAGAGTTGTGGCACCTCTACGTCTGGTCCGGTCATTGTAAAACCGGTCGAAACCAGACAGACGATCTCTGAATCT

14,110

MATR3

MATR3-201

L P L S S Q H R G D A D Q A S N I L A S F G L S A R D L D

ENSE00003774855

MATR3-201

Donor Template SNV -> REV

AGGGAAATAGAAGAGTTGTGGCACCTCTACGTCTGGTCCGGTCAT

Donor Template REV -> SNV

TGAACTGAGTCGTTATCCAGAGGACAAGATTACTCCTGAGAATTTGCCCAAATCCTTCTACAGCTTAAAAGGAGGAGAACTGAA
ACTTGACTCAGCAATAGGTCTCCTGTTCTAATGAGGACTCTTAAACGGGGTTTAGGAAGATGTCGAATTTTCTCCTCTTGACTT

14,195

MATR3

MATR3-201

E L S R Y P E D K I T P E N L P Q I L L Q L K R R R T E

ENSE00003774855

MATR3-201

GAAGGCCCTACCTTGAGTTATGGTAGAGATGGCAGATCTGCTACACGGGAGCCACCATACAGAGTACCTAGGGATGATTGGGAAG
CTTCCGGGATGGAACCTCAATACCATCTCTACCGTCTAGACGATGTGCCCTCGGTGGTATGTCTCATGGATCCCTACTAACCCTTC

14,280

MATR3

MATR3-201

E G P T L S Y G R D G R S A T R E P Y R V P R D D W E

ENSE00003774855

MATR3-201

AAAAAAGGCACTTTAGAAGAGATAGTTTTGATGATCGTGGTCTTAGTCTCAACCCAGTGCTTGATTATGACCATGGAAGTCGTTT
TTTTTCCGTGAAATCTTCTCTATCAAACTACTAGCACCAGGATCAGAGTTGGGTACGAACTAATACTGGTACCTTCAGCAAG

14,365

MATR3

MATR3-201

E K R H F R R D S F D D R G P S L N P V L D Y D H G S R S

ENSE00003774855

MATR3-201

TCAAGAATCTGGTTATTATGACAGAATGGATTATGAAGATGACAGATTAAGAGATGGAGAAAAGGTGTAGGGATGATTCTTTTTTT
AGTTCTTAGACCAATAATACTGTCTTACCTAATACTTCTACTGTCTAATTCTCTACCTCTTTCCACATCCCTACTAAGAAAAAAA

14,450

MATR3

MATR3-201

210 215 220 225 230 235
Q E S G Y Y D R M D Y E D D R L R D G E R C R D D S F F

ENSE00003774855

MATR3-201

GGTGAGACCTCGCATAACTATCATAAATTTGACAGTGAGTATGAGAGAATGGGACGTGGTCCTGGCCCTTACAAGAGAGATCTC
CCACTCTGGAGCGTATTGATAGTATTTAACTGTCACCTCATACTCTCTTACCCTGCACCAGGACCGGGGAATGTTCTCTCTAGAG

14,535

MATR3

MATR3-201

240 245 250 255 260
G E T S H N Y H K F D S E Y E R M G R G P G P L Q E R S

ENSE00003774855

MATR3-201

CTCTCTTACCCTGCACCAGGACCGG

PCR Reverse

TCTTTGAGAAAAAGAGAGGCGCTCCTCCAAGTAGCAATATTGAAGACTTCCATGGACTCTTACCGAAGGGTTATCCCCATCTGTG
AGAAACTCTTTTTCTCTCCGCGAGGAGGTTTCATCGTTATAACTTCTGAAGGTACCTGAGAATGGCTTCCCAATAGGGGTAGACAC

14,620

MATR3

MATR3-201

265 270 275 280 285 290
L F E K K R G A P P S S N I E D F H G L L P K G Y P H L C

ENSE00003774855

MATR3-201

CTCTATATGTGATTTGCCAGTTCATTCTAATAAGGTGAGTTAACTCAACAGATGCTTCTAATTTCTTTTACATTGTAGTGCCTAT
GAGATATACTAAACGGTCAAGTAAGATTATTCCACTCAATTGAGTTGTCTACGAAGATTAAGAAAAATGTAACATCACGGATA

14,705

MATR3

MATR3-201

295 300
S I C D L P V H S N K

ENSE00003774855

MATR3-201

TTACCTATATCTTTGACTCTAATTCTGTAGTCTGATGACATTGAGTTGATCAAGCATTTTTAACTTTTGGAACTTACTTTA
AATGGATATAGAACTGAGATTAAGACATCAGACTACTGTAACCTCACTAGTTCGTAAAAATTTGAAACTCTTGTGAATGAAAT

14,790

MATR3

MATR3-201

MATR3-201

TTTGGAAAGGTAATTGTTTTTGGAGCATTTTTAAACCAGGGCTTTACATTAATATATTCTGCCTAGATTACTTCTGGCCACAAAAGCTA
AAACCTTCCATTAACAAAACTCGTAAAAATTTGGTCCCGAAATGTAATTATATAAGACGGATCTAATGAAGACCGGTGTTTTCGAT

14,875

MATR3

MATR3-201

MATR3-201

TCATCCACTGAGATTATCTTGGTGGTTTTGGGCATCAATATGTTCTTCTTAATCATATATTTAAGCAGGTTTTTTTTTGTCTGCTT
AGTAGGTGACTCTAATAGAACCAACCAAAAAACCGTAGTTATACAAGAAGAATTAGTATATAAATTCGTCCAAAAAAAACAGACGAA

14,960

MATR3

MATR3-201

MATR3-201

TGTTGAATTGTTTTAAGTATTTTTTTTGCAGTCAATGTGCTCTGCCATTTCAGGATGCTAGATTTTCAGCTCTCCATCTGTCTTGAT
ACAACTTAACAAAATTCATAAAAAAACGTCAGTTACACGAGACGGTAAGTCCTACGATCTAAAGTCGAGAGGGTAGACAGAACTA

15,045

MATR3

MATR3-201

MATR3-201

TGCTGATTTGTATGTAGTAAAGATGTATTCTTGAACAATTCCTTTTTTTTCTTATCTGTGGCTACAGGGAAAGAGTTAATGTAG
ACGACTAAACATACATCATTCTACATAAGAAGTTGTTAAGAGAAAAAAGGAATAGACACCGATGTCCCTTTCTCAATTACATC

15,130

MATR3

MATR3-201

MATR3-201

AGCCCTGGTGTGTTTGTTCAGTATGTTTCATATTTTAGATTAGTTCATTCTTCCTTTTTTAATTTCCCTTTAACACAAACTCTCAT
TCGGGACCACAAAACAAAGTCATACAAAGTATAAAATCTAATCAAGTAAGAAGGAAAAAATTAAAGGGAAATTGTGTTTGAGAGTA

15,215

MATR3

MATR3-201

MATR3-201

ACTATGACTGAAATTTTTTCATCATTTTTTTTCTCCTTTTCCACAACCTTCTTAAACATACTTCAAAACTCACTTTTTATTATCCC
TGATACTGACTTTAAAAAGTAGTAAAAAAAAGAGGAAAAGGTGTTGAAAGAATTTGTATGAAGTTTTGAGTGAAAAATAATAGGG

15,300

MATR3

MATR3-201

MATR3-201

ATGTTACATCTGTCCCTTTAGAGACTTGGACAAATCAACTACTACAGTATCCTGCTCTGTGTTCCCTCATAAACAAATTCTTTTTC
TACAATGTAGACAGGGAAATCTCTGAACCTGTTTAGTTGATGATGTCATAGGACGAGACACAAGGAGTATTTGTTTAAGAAAAAG

15,385

MATR3

MATR3-201

MATR3-201

TGAGTTAGGCTTAGACTTCTGAAATAGTCATTTGAAAAGAAAATCTAATTCCTTTGCTTTAATTATCACATCTGGCAAAATGG
ACTCAATCCGAATCTGAAGACTTTATCAGTAAACTTTTCTTTTAGATTAAGAGGAAACGAAATTAATAGTGTAGACCGTTTTACC

15,470

MATR3

MATR3-201

MATR3-201

GAAC TTTT TCAA AATGCC CTTT TAAATATG TTGTC TTTCTCT TTTCAACT TTTTTCAG TGTTACTC ATTCTG ACTTTTTT TCCCCC
CTTGAAAAAG TTTTACGGGAAAAATTTATACAACAGGAAAAGAGAAAAGTTGAAAAAGTCACAATGAGTAAGACTGAAAAAAAAGGGGG

15,555

MATR3

MATR3-201

MATR3-201

AATATATGGTGCAGTTGACTTTAAAGTCATTGTTATAGCACCCCACTAGCTTGATCTATAATCTGTGACCGTCCATTTTTTCTCTGA
TTATATACCACGTCAACTGAATTTT CAGTAACAATATCGTGGGGTGATCGAACTAGATATTAGACACTGGCAGGTAAAAAAGGACT

15,640

MATR3

MATR3-201

MATR3-201

TGTGCTCTACTTAACTGGAACAAGTTGCTGCCATGAAATTGATTTGATGGTTACTGTTACAGGGTTTTTCTTTACAGTAACATCT
ACACGAGATGAATTGACCTTGTTCAACGACGGTACTTTAACTAACTACCAATGACAATGTCCCAAAAAGAAATGTCATTGTAGA

15,725

MATR3

MATR3-201

MATR3-201

GGAAGGGTCATTTTTCTTTTCATAGCTAATCCTTTGATAAGCATTTTTTTAGTAAATGAGTATGGATTTTTTTTTTAGTAGACTAAAT
CCTTCCCAGTAAAAGAAAAGTATCGATTAGGAACTATTCGTAAAAAATCATTTACTCATACCTAAAAAAAATCATCTGATTTA

15,810

MATR3

MATR3-201

MATR3-201

CATACCATTGTTTTTAATATTCTGTTAAAGAGTATTACCAGTCACTCCCTTTCTTGTGTTGGATCTCAGTATTTTTGTCTTTT
GTATGGTAACAAAAATTATAAGACAATTTCTCATAATGGTCAGTGAGGGAAAAGGAACACAAACCTAGAGTCATAAAAAACAGAAAA

15,895

MATR3

MATR3-201

MATR3-201

AATCTTTAATCTGTACCAAAGTAAATTAACATAAATGCTAAATTTAGGTTTATTTAAACATTTAAGAAGATGTATTTTCATTAAG
TTAGAAAATTAGACATGGTTTCATTTAATTGATTTACGATTTAAATCCAAATAAATTTGTAATTCCTTCTACATAAAAAGTAATTC

15,980

MATR3

MATR3-201

MATR3-201

AAATACAACCCAGACTCACAAAAGCCAGCAAATTTTAATTGGTATATGTTTTGGGTGTTACCTTTTCTAAATTTGTTGGCTCT
TTTATGTTGGGGTCTGAGTGTTTTCGGTCGTTTAAATTAACCATATACAAAACCCACAATGGAAAAGGATTTAAACAACCGAGA

16,065

MATR3

MATR3-201

MATR3-201

ACTAAATATATCATGGAATTCATTTTAGTTTCTGATCAGCACTAAACTTTAAATTTTAGGTCCCCTGTGAATTCATAGAATGAAA
TGATTTTATATAGTACCTTAAGTAAAATCAAAGACTAGTCGTGATTTGAAATTTAAAATCCAGGGCACACTTAAGTATCTTACTTT

16,150

MATR3

MATR3-201

MATR3-201

AGGTCCATTAAACACTGGTGACTCCAATTTTTCTGCGTTATTTCTTGCCTGTTTATAAGGAAATAATAGCAGAAATGTCAGTAT
TCCAGGTAATTTGTGACCACTGAGGTTAAAAAAGACGCAATAAAGAACGGACAAATATTCCTTTATTATCGTCTTTACAGTCATA

16,235

MATR3

MATR3-201

MATR3-201

GACCAATATTCTCAGAAAGGGTCTCTAAATTCTGAGGAAAATAGATAGTTACAAGTGCTCAAATGAGAGTGATGTGAAGGGACT
CTGGTTATAAGAGTCTTTCCAGAGATTTAAGACTCCTTTTATCTATCAATGTTTCACAGAGTTTACTCTCACTACACTTCCCTGA

16,320

MATR3

MATR3-201

MATR3-201

TAAAAAATCTTCGCTACTGGAGTCATTAAGCTGTTGGGACATCATGAACACAATGGAACCATGAGAGGACTTCGAGAAAAGTTTC
ATTTTTTAGAAGCGATGACCTCAGTAATTCGACAACCCTGTAGTACTTGTGTTACCTTGGTACTCTCCTGAAGCTCTTTTCAAAG

16,405

MATR3

MATR3-201

MATR3-201

TGTTTTTATGTATGATTATGCTTTTTTCTTCAAATTTTGCTACTTTCTAGTTCCTGAAGAAGGCTAATAACTTAAATGGATCTA
ACAAAAATACATACTAATACGAAAAAAGGAAGTTTAAAACGATGAAAGATCAAGGACTTCTTCCGATTATTGAATTTACCTAGAT

16,490

MATR3

MATR3-201

MATR3-201

AATTAACAAAAGAGCAGTTTTTACATATTTTGTGAAACTATGGATTCAAGAGTAAGATACACTACCCTAGTGCAAGAGGTACTT
TTAATTGTTTTCTCGTCAAAAATGTATAAAACTACTTTGATACCTAAGTTCTCATTCTATGTGATGGGATCACGTTCTCCATGAA

16,575

MATR3

MATR3-201

MATR3-201

TTAGCCTGTAAAAATGCTTAGGTCCTAGCTAGTTTTGGTATTCTGTCAAATACTGAGTACATTTGAGAACTATTTTAGAGGCCT
AATCGGACATTTTTACGAATCCAGGATCGATCAAACCATAAAGACAGTTTTATGACTCATGTAAACTCTTGATAAAATCTCCGGA

16,660

MATR3

MATR3-201

MATR3-201

GTAGCTGGGATTACAGGCATGCGCCACCACGCCAGCTAATTTTATATTTTTAGAGCCAGGGTTTCTCCATGTTGGTCAGGCTGG
CATCGACCCTAATGTCCGTACGCGGTGGTGCGGGTCGATTAAAAATATAAAAAATCTCGGTCCCAAAGAGGTACAACCAGTCCGACC

17,340

MATR3

MATR3-201

MATR3-201

TCTTGAACCTCCTGACCTCAGGTGATTCACTGCCTTGGCCTCCCAAAGTCCTGGGATTACAGGTGTGAGCCATCGCACCCAGTCAT
AGAACTTGAGGACTGGAGTCCACTAAGTGACGGAACCGGAGGGTTTCAGGACCCTAATGTCCACACTCGGTAGCGTGGGTGAGTA

17,425

MATR3

MATR3-201

MATR3-201

CAGATTGCTTTTCTATGCAATCTCAAGCTTTCTCAGCTTCTTTCACTTAAAGAAAATTACCCACTACAGCACTTTGGCTGTCTT
GTCTAACGAAAAGATACGTTAGAGTTGAAAGAGTCGAAGGAAAGTGAATTTCTTTTAATGGGTGATGTCGTGAAACCGACAGAA

17,510

MATR3

MATR3-201

MATR3-201

GTCACCTTGAGTTTATATTAAGTTATACTTTTTCTGCCATTCTGTAAGTGCTTCCCAAATTCCTTTTTTTCTCTCTATAAGGTAT
CAGTGAACCTCAAATATAATTCATATGAAAAAGACGGTAAGACATTCACGAAGGGTTTAAGAAAAAAGAGAGATATCCATA

17,595

MATR3

MATR3-201

MATR3-201

CTCAGATACATCAAGGTGAATGTAGTTTTCTACAGAAATGTCTGAATTTAAAAAGTGCACGAATCCTTTATTAATCTGATTTTA
GAGTCTATGTAGTTCACCTTACATCAAAAAGGATGTCTTTACAGACTTAAATTTTTACAGTGCCTTAGGAAATAATTAGACTAAAAT

17,680

MATR3

MATR3-201

MATR3-201

CAGGAGTTACCTCAGTGTAGAGTCCAGGGATATATTTTTATAAACTCTTTCCTTAGTCCCCACCGTAAACCAACCAGTAAT
GTCCTCAATGGAGTCACATCTCAGGTCCCTATATATAAAAAATTTTTGAGAAAAGTGAATCAGGGGTGGCATTGGTTGGTCATTA

17,765

MATR3

MATR3-201

MATR3-201

AGATCAGTAGTACAGATTAGTCATTGGATGAGTTTGGGAGGTATGTGATTGATTTTTGATCTTGGCCTTCTTTTTTCACTTTG
TCTAGTCATCATGTCTAATCAGTAACCTACTCAAACCTCCATACACTAACTAAAAACTAGAACCAGGAAAGAAAAAGTGAAC

17,850

MATR3

MATR3-201

MATR3-201

AAAGACCAGACACACTTTTCCCCTAAGTTTGAACCTTTAAACAACGTGGAGGATTGGATATAATTTCTGTTTCAGCTATGTACCTT
TTTCTGGTCTGTGTGAAAAGGGGATTCAAACCTTGGAAATTTGTTGCACCTCCTAACCTATATTTAAAGACAAGTCGATACATGGGA

17,935

MATR3

MATR3-201

MATR3-201

TTCTAGCTCCTATGAAATAGAAGCATGCGTAGTAGGATAACATTTATTTCTCTCCACAACCTTAAGAATATTTTAAGTAAAATCT
AAGATCGAGGATACTTTATCTTCGTACGCATCATCCTATTGTAATAAAGAGAGGGGTGTTGAATTCTTATAAAAATTCATTTTAGA

18,020

MATR3

MATR3-201

MATR3-201

GAATATTTTTAGTTTCAGAGAATTGTAAGTCGTTAATTGGTATTTGTTTAATTAATCCTTTTTTTTTTTTTTTTTTTTTTTTTTTT
CTTATAAAAATCAAGTCTCTTAACATTCAGCAATTAACCATAAACAAATTAATTAGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

18,105

MATR3

MATR3-201

MATR3-201

TTTTTTTGAGAAGGTTTCTCGCTCTGTGTCCAGGCTGGAGTACAGTGGCGTGATCTTGGCTCACTGCATCCTCTGCCTTTCGGG
AAAAAACTCTTCCAAAGAGCGAGACACAGGGTCCGACCTCATGTCAACCGACTAGAACCGAGTGACGTAGGAGACGGAAAGCCC

18,190

MATR3

MATR3-201

MATR3-201

TTCAAGCAATTCTCCTGCCTCAGCATCCCAGGTAGCTGGGATTACAGGCATACATCACCATGCCAGCTAATTTTTTTGTATTTT
AAGTTCGTTAAGAGGACGGAGTCGTAGGGTCCATCGACCTAATGTCCGTATGTAGTGGTACGGGTCGATTAATAAACATAAAA

18,275

MATR3

MATR3-201

MATR3-201

TAGTAGAGACGGGTTTACCATGTTAGCCAGGCTGGTCTCTAACTCCTGGCCTCAGGTGATCCGCCTGCCCGGCTCCCAAAGT
ATCATCTCTGCCCAAAGTGGTACAATCGGTCCGACCAGAGATTGAGGACCGGAGTCCACTAGGCGGACGGGGCCGGAGGGTTTCA

18,360

MATR3

MATR3-201

MATR3-201

GCTGGGATTACAAGTATGAGCCACCACGCCAGCCAAGGCTTCTAAATTTTGTGAACTTACCTGTGGCTCCTCTGACTTAGAGCC
CGACCCTAATGTTCACTCGGTGGTGCGGGTCCGTTCCGAAGATTTAAACACTTGAATGGACACCGAGGAGACTGAATCTCGG

18,445

MATR3

MATR3-201

MATR3-201

ATTTTATTTTATTTTATTTTATTTTGTGTTTTATGTTTTTGAGAAAGGGTCTTTTGTCTTTGTAGCCCACGCTGAAGTGCGCTTAGGTGTTCT
TAAAAATAAAAATAAAAATAAAAACAAAATACAAAACCTCTTTCCAGAAAACGAAACATCGGGTGCGACTTCACGCGAATCCACAAG

18,530

MATR3

MATR3-201

MATR3-201

GCAGCTCATTGCACTCTCTACCACCCAGGCTCAAGTGACGCATGTACCACCACCACATCTGGCGTTTTTTTTCTTGATAGAGATCG
CGTCGAGTAACGTGAGAGATGGTGGGTCCGAGTTCACTGCGTACATGGTGGTGGTGTAGACCGCAAAAAAAGAACTATCTCTAGC

18,615

MATR3

MATR3-201

MATR3-201

GGTTTCACTGTGTTGCCAGGCTGGTCTCAAACCTCTGGGCTCAAGTAATCTGCCTGCTTTGGCCTCCCAGAGTGCTGGGATCGT
CCAAAGTGACACAACGGGTCCGACCAGAGTTTGAGGACCCGAGTTCATTAGACGGACGAAACCGGAGGGTCTCACGACCCTAGCA

18,700

MATR3

MATR3-201

MATR3-201

ATGCGTGAGCCACTGCACCCGGCCCTTACAAGCCATTTTAAAACCTGGTCCCAAGAAGGCAGTGGTCCATTACTTTCCAGTTGAA
TACGCACTCGGTGACGTGGGCCGGGAATGTTTCGGTAAAATTTTGACCAGGGTTCTTCCGTCAACAGGTAATGAAAGGTCAACTT

18,785

MATR3

MATR3-201

MATR3-201

ACTTTAGATATCCCAAATAGCTGATGATTAGAGAGCCAGCTGGAGAGATCTTGAGTTCCTTAGCTATTAGCCATTATTTTAAAAA
TGAAATCTATAGGGTTTATCGACTACTAATCTCTCGGTGACCTCTCTAGAATCAAGGAATCGATAATCGGTAATAAAAATTTTT

18,870

MATR3

MATR3-201

MATR3-201

GATAATCTAGCTTTGAGAGACCTGGAAATAGTAGTTTATAGCTTCCAACATTTTAAGGAAGGTACCATTCTATTTGGATGAGTTC
CTATTAGATCGAAACTCTCTGGACCTTTATCATCAAATATCGAAGGTTGTAATAATTCCTTCCATGGTAAGATAAACCTACTCAAG

18,955

MATR3

MATR3-201

MATR3-201

CATTTTAGTTTACAGGATTTTATTTTATTTATTTATTTATTTTGGAGACAGTTTCACTCTTGCCAGACTGGAGTGCAATGGTG
GTAAAATCAAATGTCCTAAAATAAAAATAAAAATAAAAATAAAAACCTCTGTCAAAGTGAGAACGGGTCTGACCTCACGTTACCAC

19,040

MATR3

MATR3-201

MATR3-201

TGATCTTGGCTCACTGCAACCTCTGCCTCCCAGGTTCAAGCTATTCTCCTGCCTTAGCCTCCCAAGTAGCTGGAATTACAGGCAC
ACTAGAACC GAGTGACGTTGGAGACGGAGGGTCCAAGTTCGATAAGAGGACGGAATCGGAGGGTTCATCGACCTTAATGTCCGTG

19,125

MATR3

MATR3-201

MATR3-201

CTGCCACCATGCCTGGCTAATTTTTGTATTTTAAATAAAGACAGCGTTTTACCATGTTGGCCAGGCTGGTCTTGAACCTCCTGACC
GACGGTGGTACGGACCGATTAAAAACATAAAAAATTATTTCTGTGCGAAAAGTGGTACAACCGGTCCGACCAGA AACTTGAGGACTGG

19,210

MATR3

MATR3-201

MATR3-201

TCAGTTGATGCTCCACCTTGGCCTTCCAAGTGCTGGGACTGCAGGCCCTGAGCCACCGCACCTGGCCTTTACAGGATTTTAGA
AGTCAACTACGAGGGTGAACCGGAAGTTTTACGACCTGACGTCCGGACTCGGTGGCGTGGACCGGAAAGTGTCTAAAATCT

19,295

MATR3

MATR3-201

MATR3-201

TAATTTTACTAGAGCATAGGAATGTACCTAAACTGTTGTCAGGTAAATATAAACCAGTTTTTTTTTTTTTTTTTTTTTTAGGAGCTC
ATTA AATGATCTCGTATCCTTACATGGATTTGACAACAGTCCATTTATATTTGGTCAAAAAAAAAAAAAAAAAAAAAATCCTCGAG

19,380

MATR3

MATR3-201

MATR3-201

ATTTATAA AATACCAATCCGCAGCTTTTTGAAAAGCACGTATCTTGTAATTTGGTACCTTGGTACCTTACTCTAATTTAGTTCAGC
TAAATATTTTATGGTTAGGCGTCGAAAAACTTTTCGTGCATAGAACATTAACCATGGAACCATGGAATGAGATTAATCAAGTCG

19,465

MATR3

MATR3-201

MATR3-201

TCTCAGTGAGACATCCCCCTTTAAAAACACATCGCCTGACCATGTTTTATATTCCAAATATAATTGTATTGGGTAGTGTGGGTGT
AGAGTCACTCTGTAGGGGGAAATTTTTGTGTAGCGGACTGGTACAAAATATAAGGTTTATATTAACATAACCCATCACACCCACA

19,550

MATR3

MATR3-201

MATR3-201

TACAGAAATTACCTCAATTTGTGGGAGTTTGTGAAACATCAATAATAGTTGTAAAGCAGGAATTGTAAAACAAGACTGCTTTATA
ATGTCTTTAATGGAGTTAAACACCCTCAAACACTTTGTAGTTATTATCAACATTTTCGTCTTAACATTTTGTCTGACGAAATAT

19,635

MATR3

MATR3-201

MATR3-201

ATCAGTGTAAATAATAGTTCTTTTTTTTTTTTTTTTTTTTTTTAGCACATTCCATGTGCCTGGCAAGGGTCTGATAAGCAGTTTACCTTT
TAGTCACATTATTATCAAGAAAAAAAAAAAAAAAAAAAAAAAAATCGTGTAAGGTACACGGACCGTTCCCAGACTATTTCGTCAAATGGAAA

19,720

MATR3

MATR3-201

MATR3-201

ATTGACTCATTGCTTTTCACAACAACCCTATGAGACTCTTGTCCCAGTGAATTTAAATAACACGGACCAAAGATTACATCTTT
TAACTGAGTAAACGAAAAGTGTGTTGGGATACTCTGAGAACAGGGTCACTTAAATTTATTGTGCCTGGTTTCTAAGTGTAGAAA

19,805

MATR3

MATR3-201

MATR3-201

GTAATTTGGGAGTGAACCTAGGCAGTCTAATAGCAGAGCCCACTTTTTGTAACCTCTCTTTCTTACATTGCCTAAAAAGTTAACT
CATTAAACCCTCACTTGGATCCGTCAGATTATCGTCTCGGGTGAAAAACATTGAAGAGAAAAGAATGTAACGGATTTTTCAATTGA

19,890

MATR3

MATR3-201

MATR3-201

CATTTATATCTGCATTTTTTTTCCTAAAGAAATTTATTTGAATAAAATAAGAGTTACTTCAATTTAAAGTAAACCATAAAAAGAGTA
GTAAATATAGACGTAAAAAAGGATTTCTTTAAATAAACTTATTTTATTCTCAATGAAGTTAAATTTCAATTTGGTATTTTCTCAT

19,975

MATR3

MATR3-201

MATR3-201

AATAGTGAAAGAATGTCATGTTTCCACCCTAAATTTGGAAAGAGGCACTCCTTAAATTTGCTTATTTTGGGGAAATACAAAGGG
TTATCACTTTCTTACAGTACAAAGGGTGGGATTTAAACCTTTCTCCGTGAGGAATTTAAACGAATAAAACCCCTTTATGTTTCCC

20,060

MATR3

MATR3-201

MATR3-201

AGCATAATATTTTGATAAATGGGATTCGTTTTCTAGAAAAGCCATTCTGTTGAATCATGTTAGCATTATGTTAATGCTAATC
TCGTATTATAAACTATTTACCCTAAGCAAAAAGATCTTTTCGGTAAGGACAACCTTAGTACAATCGTAAAATACCATTACGATTAG

20,145

MATR3

MATR3-201

MATR3-201

ATGGTGTATTTTTCACTTCACTGTGTATTTAGTAGGTAGTAAACCTGGAACATCCTCAAAGCTGGATGTGATTAAAGTTTTAGTT
TACCACATAAAAAGTAAGTGACACATAAATCATCCATCATTGGACCTTGTAGGAGTTTTCGACCTACACTAATTTCAAATCAA

20,230

MATR3

MATR3-201

MATR3-201

TTTGTTTTGTTTTGTTTTGTTTTGTTTTGTTTTGTTTTGAGACGGAGTCTTTGTCATCCAGGCTGGAGTGCAGTGGCGCAGTCTCAGC
AAACAAAAACAAAAACAAAAACAAAAACAAAACTCTGCCTCAGAAACAGTAGGTCCGACCTCACGTACC CGCGTCAGAGTCG

20,315

MATR3

MATR3-201

MATR3-201

TCACTGGAATCTCCGCCTTTTGGGTTCAAGAGATTCTGCTGCCTCAGCCTTCCAAGTAGCTGGGACTACAGGCGTGTGCCACCAC
AGTGACCTTAGAGGCGGAAAAACCAAGTTCTCTAAGACGACGGAGTCGGAAGGTTTCATCGACCCTGATGTCCGCACACGGTGGTG

20,400

MATR3

MATR3-201

MATR3-201

GCCCGGCTAAATTTTGTATTTTTGTAGAGATGGGGTTTTCGCCATGTTGGCTAGGCTGGTTTCAAACCTCTGGTCTCAAATGATC
CGGGCCGATTTAAACATAAAAAACATCTCTACCCCAAAGCGGTACAACCGATCCGACCAAAGTTTGAGGACCAGAGTTTACTAG

20,485

MATR3

MATR3-201

MATR3-201

CATCCATCTCAGCCTCCCAAAGTGTGGGATTATAGGCATGAGCCACCATGCTCGGCCTAAAAGATTCTATTTTAACTAATTGTT
GTAGGTAGAGTCGGAGGGTTTCACAACCTAATATCCGTA CT CGGTGGTACGAGCCGGATTTTCTAAGATAAAATTGATTAACAA

20,570

MATR3

MATR3-201

MATR3-201

CACATTTATAGTATATAGTTTCTAGAAAAGTAGATATAAACATGGATGTTTTATTTCAGAGTGCTATAAAGTAGCATACAATGAAT
GTGTAATATCATATATCAAAGATCTTTTTCATCTATATTTGTACCTACAAAATAAGTCTCACGATATTTTCATCGTATGTTACTTA

20,655

MATR3

MATR3-201

MATR3-201

ACTTCAGTTTGGTCCACAGTAAAAATTAATAAGCCTTGCTGATCTCAAGGTTAGTTACTACTCTTGATCTTTATTA ACTCTATAT
TGAAGTCAAAC CAGGTGTCATTTTTAATTATTCGGAACGACTAGAGTTCCAATCAATGATGAGA ACTTAGAAAATAATTGAGATATA

20,740

MATR3

MATR3-201

MATR3-201

CTTTTCCCTGTCAAATATCTTAAGTATGTTGACAAGTTAATCCAGTTTTTCCAAGAATGTGCATAGCGTATTTGAGGGCAGGATC
GAAAAGGGACAGTTTATAGAATTCATACA ACTGTTCAATTAGGTCAA AAAAGGTTCTTACACGTATCGCATAAACTCCCGTCTCTAG

20,825

MATR3

MATR3-201

MATR3-201

AAGCCTCAAGGATTCAGAGAAATGGTTTTAAATTAATCAATGTGATTTAGTGAATGGGCAGGTGTTTGTACAGCCTATGATACT
TTCGGAGTTCCTAAGTCTCTTTACCAAAATTTAATTTAGTTACACTAAATCACTTACCCGTCCACAAACATGTCGGATACTATGA

20,910

MATR3

MATR3-201

MATR3-201

GCATAGACATTAATATCCTAGAGTTTGAATGGTTCAGATGAAAATATTTTCAGCTTTATTTTTGTTAATTCTACTAATTTACTTTG
CGTATCTGTAATTATAGGATCTCAAACCTACCAAGTCTACTTTTATAAAGTCGAAATAAAAAACAATTAAGATGATTAAATGAAAC

20,995

MATR3

MATR3-201

MATR3-201

CTGCAGGAGTGGAGTCAACATATCAATGGAGCAAGTCACAGTCGTCGATGCCAGCTTCTTCTTGAAATGTAGGAGTTTGAAATAC
GACGTCCTCACCTCAGTTGTATAGTTACCTCGTTCAGTGTACGACGCTACGGTCGAAGAAGAAGCTTTACATCCTCAAACCTTTATG

21,080

MATR3

MATR3-201

305 310 315 320 325
E W S Q H I N G A S H S R R C Q L L L E I
ENSE00003765447

MATR3-201

CTTTAAACATCCTTATCGTGAATCAGAATCAGCCATTATTGGTTTTTGGGAGTTCATCATTTACTTGTAAATATCCACAATGTTA
GAAATTTTGTAGGAATAGCACTTAGTCTTAGTTCGGTAATAACCAAAAACCTCAAGTAGTAAATGAACATTATAGGTGTTACAAT

21,165

MATR3

MATR3-201

MATR3-201

ATATCACATAGTGGTACTGTATGGACAATACTATTTACAAGTAAAATGTTTATAGATCTGGAAATTTTCATATTGAATATTAGATGCA
TATAGTGTATCACCATGACATACCTGTTATGATAAATGTTTCATTTTACAATCTAGACCTTTAAAGTATAAATTATAATCTACGT

21,250

MATR3

MATR3-201

MATR3-201

GTAATAATATTTTTGTTATTTAACATTTCTAGGATACATATATATTGGTCATTATACAAATTGGTGATTTTTACTAGACATAGTGA
CATTATTATAAAACAATAAATTGTAAAGATCCTATGTATATATAACCAGTAATATGTTTAAACCACTAAAAATGATCTGTATCACT

21,335

MATR3

MATR3-201

MATR3-201

AAGATAGTATTTGATATGTAGAGTGGATTAAACAGTAGCATTTTTAAATAATACATGCTCTAAAAATGTAAAAGATACGGAAAAGA
TTCTATCATAAACTATACATCTCACCTAATTTGTCATCGTAAAAATTATTATGTACGAGATTTTTACATTTTCTATGCCTTTTTCT

21,420

MATR3

MATR3-201

MATR3-201

GGGTAGGTTATTAAAAAGATTCTAATTCATTGTCCAGCAAAATCCTTGGTGATGAATTTTTTTTTTTTTTTTTGCTTTTGAGATCTT
CCCATCCAATAATTTTCTAAGATTAAGTAACAGGTCGTTTTAGGAACCACTACTTAAAAAAAAAAAAAAAAAACGAAAACCTCTAGAA

21,505

MATR3

MATR3-201

MATR3-201

TGGTTTTGAGTTCAGGCTGCTACCATGAAATGGAATTCCTAAAGAAACTCCCTGCTTAAGCAGCACACAGTGCCCATTTGTTCACT
ACCAAAACTCAAGTCCGACGATGGTACTTTACCTTAAGGATTTCTTTGAGGGACGAATTCGTCGTGTGTACCGGGTAACAAGTGA

21,590

MATR3

MATR3-201

MATR3-201

GGAGTTGGAATTTTACATATGCCTAACTCTGTTGGGGCTATTCTTTCTTTCTAATGTCACAACCTCAACTGTGCTCTTGGTATTA
CCTCAACCTTAAAAGTGATACGGATTGAGACAACCCCGATAAGAAAGAAAGATTACAGTGTTGAGTTGACACGAGAACCATAAT

21,675

MATR3

MATR3-201

MATR3-201

ATATTGGAGAAGGAAAAATCTGTGCTCTGTTCTTGTCTTCTATGTAACCCACATTTCTAATTTCTTTGTGCGGCACTTCCTCCTTACA
TATAACCTCTTCTTTTAGACACGAGACAAGAACAAGATACATTGGGTGTAAGATTAAAGAAACACGCCGTGAAGGAGGAATGT

21,760

MATR3

MATR3-201

MATR3-201

ATTTAACAAATAGAGGAAAAACTTAATTTCAACATTATCTGCATTTGCAAGCAATACAAAACAAGTTTATTCTCGTGGATTATTT
TAAATTGTTTATCTCCTTTTTGAATTAAGTTGTAATAGACGTAACGTTTCGTTATGTTTTGTTCAAATAAGAGCACCTAATAAA

21,845

MATR3

MATR3-201

MATR3-201

TGAAGTTCTGAAATTTTTCTTTTGAATATCTATTGGAAATGCTTTAAACTATGTTTCTAACACTTAGACTCTCAGATAACTTT
ACTTCAAGACTTTAAAAAGAAAACTTTATAGATAACCTTTACGAAATTTGATACAAAGATTGTGAATCTGAGAGTCTATTGAAA

21,930

MATR3

MATR3-201

MATR3-201

ACTAATAAATGATCTCTATTTTAGAGGCCAAACAAGGCTGTTTTGTGAAAAGGACAGTTTTATTTTAAAGTTAATTTTCTGGTCT
TGATTATTTACTAGAGATAAAATCTCCGGTTTGTTCGGACAAAACACTTTTCTGTCAAATAAAATTTCAATTTAAAGACCAGA

22,015

MATR3

MATR3-201

MATR3-201

TTTTAAAGCTACCCAGAATGGAATCCTGACAATGATACAGGACACACAATGTAAGTTAAATTTTTTAAAGCTACCATTTGTAAAGG
AAAATTTTCGATGGGTCTTACCTTAGGACTGTTACTATGTCTGTGTGTACATTCAATTTAAAAAATTCGATGGTAAACATTTCC

22,100

MATR3

MATR3-201

Y P E W N P D N D T G H T M

ENSE00003761650

MATR3-201

AGATCAATGTAAGGAATTCAGGTTTCACTTTCAACATTTTCATAAACAAAGTATTTTCAGAATTTCTTTACTGAAAATGAGACTTT
TCTAGTTACATTCCTTAAGTCCAAAGTGAAAGTTGTAAAGTATTTGTTTCATAAAAGTCTTAAAGAAATGACTTTTACTCTGAAA

22,185

MATR3

MATR3-201

MATR3-201

GATAAAATTCACCTTTGGTTAACAATTTTTAGAAATATATATTATGTAGTAATTTGTATTCTTTTATTGTTAATGTAGACTTTGACC
CTATTTTAAGTGAAACCAATTGTTAAAAATCTTATATATAATACATCATTAAACATAAGAAAATAACAATTACATCTGAAACTGG

22,270

MATR3

MATR3-201

MATR3-201

TAGTTACTTCACAGATACTCTGAAAGATTGAAGTGGTTGTGGTCATATATTGGGGTGCTTTAACATTTAATCTTAATTCTTTCCA
ATCAATGAAGTGTCTATGAGACTTTCTAACTTCACCAACACCAGTATATAACCCACGAAATTGTAAATTAGAATTAAGAAAGGT

22,355

MATR3

MATR3-201

MATR3-201

ATGGACCTCTTTATTATGATTTATATTTTTATGTCTTCACTTTACTAGGGGTGATCCATTCATGTTGCAGCAGTCTACAAATCCAG
TACCTGGAGAAATAATACTAAATATAAAAATACAGAAGTGAAATGATCCCACTAGGTAAGTACAACGTCGTCAGATGTTTAGGTC

22,440

MATR3

MATR3-201

G D P F M L Q Q S T N P

ENSE00003768530

MATR3-201

CACCAGGAATTCTGGGACCTCCACCTCCCTCATTTTCATCTTGGGGGACCAGCAGTTGGACCAAGAGGAAATCTGGGTAATTATAT
GTGGTCCTTAAGACCCTGGAGGTGGAGGGAGTAAAGTAGAACCCCTGGTCGTC AACCTGGTTCTCCTTTAGACCCATTAATATA

22,525

MATR3

MATR3-201

A P G I L G P P S F H L G G P A V G P R G N L

ENSE00003768530

MATR3-201

AAAATTCATGTTACTTTTCCCTACAGAGCCGTTACTGAAAATTTTTCTTTTTATTTATTTTATTTGAGATGGGGTTTTGCTCTTAT
TTTTAAGTACAATGAAAAGGGATGTCTCGGCAATGACTTTTAAAAAGAAAAATAAATAAACTCTACCCCAAAACGAGAATA

22,610

MATR3

MATR3-201

MATR3-201

CGCCCAGGCTGGAGTGCAATGGCACGATCTCGACTCACTGCAACCTCTGCCTCCTGGGTGCAAGCAGTTCTCCTGCTTCAGCCTA
GC GGGTCCGACCTCACGTTACCGTGCTAGAGCTGAGTGACGTTGGAGACGGAGGACCCACGTTTCGTCAAGAGGACGAAGTCGGAT

22,695

MATR3

MATR3-201

MATR3-201

CCGAGTAGCTGGGATTACAGGTGCCACCACCACGCCAGCTAATTTTCGTATTTTTAGTAGAGACGGGGTTTTACCCGCGTTGGC
GGCTCATCGACCCTAATGTCCACGGGTGGTGGTGC GGGTTCGATTA AAAAGCATAAAAAATCATCTCTGCCCAAAGTGGCGCAACCG

22,780

MATR3

MATR3-201

MATR3-201

CAGACTAGTCTCGAACTCTTGGCCTCAGGTGGACTACCCGCCTCAGCCTCCAAAGTGCTAGGATTGCAGGTGCGAGCCACTGTGC
GTCTGATCAGAGCTTGAGAACCGGAGTCCACCTGATGGGCGGAGTCGGAGGTTTCACGATCCTAACGTCCACGCTCGGTGACACG

22,865

MATR3

MATR3-201

MATR3-201

CAGGCCGCAAATTTTACTTATTTATTTTAGACAGATTCTCACTCCGTCACTCAGGCTAGAGTGTAACGGTGCAATCTCTGCTCAC
GTCCGGCGTTTTAAATGAATAAATAAATCTGTCTAAGAGTGAGGCAGTGAGTCCGATCTCACATTGCCACGTTAGAGACGAGTG

22,950

MATR3

MATR3-201

MATR3-201

TGCAACCCCTGCCTCCCGGGTTAAAGCTATTCTCATGCTTCAGCCTCTCCTGAGTAACCTGGGATTACAAGTATGTGCCACCACAC
ACGTTGGGGACGGAGGGCCCAATTTTCGATAAGAGTACGAAGTCGGAGAGGACTCATTGACCCTAATGTTTCATACACGGTGGTGTG

23,035

MATR3

MATR3-201

MATR3-201

CCAGCTAATTTTTATTTTTGGTAGAGGCAGGGGTTTCGCGGTGTTGCCAGGCTGGTCTCAAACACCTGGCCTCAAATGATCT
GGTCGATTA AAAATATAAAAAACCATCTCCGTCCCAAAGCGCCACAACGGGTCCGACCAGAGTTTGTGGACCGGAGTTTACTAGA

23,120

MATR3

MATR3-201

MATR3-201

GCTCAGCCTCCCAAAGTGCTGGGATTACAGGTTTGAGTCACCACACCCGGCCCCATTCTGAAAATTAAGGCAATGATTATAGGT
CGAGTCGGAGGGTTTTACGACCCTAATGTCCAAACTCAGTGGTGTGGGCGGGGTAAGACTTTTAATTTCCGTTACTAATATCCA

23,205

MATR3

MATR3-201

MATR3-201

GAAAGAAGGCTCATTCAAATATTACACAGAAAAAACATTGCATGAAAAAGTGATGGTAATCATATATTTGTAAGAGCTTTTCATTT
CTTTCTTCCGAGTAAGTTTATAATGTGTCTTTTTTTGTAACGTACTTTTCACTACCATTAGTATATAAACATTCTCGAAAAAGTAAA

23,290

MATR3

MATR3-201

MATR3-201

GTGTTTGAAGATGCACGTTTTTTCAGTAAAATTGCTTCTTTAAGCAAGTATAGTGATTACAAGACTGAAAACCTTTCTCTTCCCAT
CACAAACCTTCTACGTGCAAAAAGTCATTTTAACGAAGAAATTCGTTTCATATCACTAATGTTCTGACTTTTGAAAAGAGAAGGGTA

23,375

MATR3

MATR3-201

MATR3-201

AAAGGTGCTGGAAATGGAAACCTGCAAGGACCTAGACACATGCAGAAAGGCAGAGTGGTCAGTAATGAAGCTTTTTGGTTTTACTG
TTTCCACGACCTTTACCTTTGGACGTTCTTGATCTGTGTACGTCTTTCCGTCTCACCAGTCATTACTTCGAAAACCAAATGAC

23,460

MATR3

MATR3-201

G A G N G N L Q G P R H M Q K G R V

ENSE00003768804

MATR3-201

TATTTATGATTTTTGGGAATATGATTTGACCTAAATCCTTACTAGTTGAGTATGTATCGTGGTCCTTATGGGAACATTGCTGTAA
ATAAACTACTAAAAACCTTATACTAAACTGGATTTAGGAATGATCAACTCATACATAGCACCAGGAATACCCTTGTAAACGACATT

23,545

MATR3

MATR3-201

MATR3-201

TTTGAACAATCACGTTTTTCTATGGCTTTGATAACAGTTAAAACCTTTAAATTTTGTATGCCCATAGTCCAGTGAGGTCACCTT
AAACTTTTGTAGTGCAAAAAGATACCGAAACTATTGTCAATTTTGAATTTAAAACATACGGGTATCAGGTCCTCCAGTGGAA

23,630

MATR3

MATR3-201

MATR3-201

AATTCAGCATCTTGAAGCTTTGCTGTCCAGTTACGCGTACAATATTTAATTTAAAAATCACTACAGAGAGTATGTTTTGACACT
TTAAGTCGTAGAACCTTCGAAACGACAGGTCAATGCGCATGTTATAAATTAATTTTTAGTGATGTCTCTCATACAAAACCTGTGA

23,715

MATR3

MATR3-201

MATR3-201

TTGAAGTAGTTTAAACGTTTGGTTATGGTCAGAAAAGAACTTACCCAGTGACGTTTGTATGTAGCTTTAAAATTTCTCTAGAATGT
AACTTCATCAAATTTGGCAAACCAATACCAGTCTTTCTTGAATGGGTCCTGCAAACTATACATCGAAATTTTAAAGAGATCTTACA

23,800

MATR3

MATR3-201

MATR3-201

TATGAGTTGTTTTACTTACACTCTCCTGGTTAATTATAGATTATAAAAAAGTCCTAATGCGTAATTGGTTTTTCATATTGCTTTAAAG
ATACTCAACAAAATGAATGTGAGAGGACCAATTAATATCTAATATTTTTTCAGGATTACGCATTAACCAAAGTATAACGAAATTTTC

23,885

MATR3

MATR3-201

MATR3-201

AGACTTAATTGCTTGGTTTTTTTTCCCTAATGGATAGGAAACTAGCAGAGTTGTTTCACATCATGGATTTTCAACGAGGGAAAAAC
TCTGAATTAACGAACCAAAAAAAGGGGATTACCTATCCTTTGATCGTCTCAACAAGTGTAGTACCTAAAAGTTGCTCCCTTTTTTG

23,970

MATR3

MATR3-201

395 400 405 410
E T S R V V H I M D F Q R G K N

ENSE00003788732

MATR3-201

TTGAGATACCAGCTATTACAGCTGGTAGAACCATTTGGAGTCATTTCAAATCATCTGATTCTAAATAAAAATTAATGAGGTATGAA
AACTCTATGGTCGATAATGTCGACCATCTTGGTAAACCTCAGTAAAGTTTAGTAGACTAAGATTTATTTTAATTACTCCATACTT

24,055

MATR3

MATR3-201

415 420 425 430 435
L R Y Q L L Q L V E P F G V I S N H L I L N K I N E

ENSE00003788732

MATR3-201

TTGAAATATTGGTATTATTTCATTTATTCATGCCACTAATATATGTTCTGCAAGAATTAATGATTTTTGTATTAGAAAAATAAAC
AACTTTATAACCATAATAAGTAAATAAGTACGGTGATTATATACAAGACGTTCTTAATTTACTAAAACATAATCTTTTTATTTTG

24,140

MATR3

MATR3-201

MATR3-201

TCAAGGTAATCTTAAGTTTATCAAATGCAGAATGTAGTAGAGGAAAAGGCCAGTAGTTGATGAATATAATAGGGTACTAATGGAT
AGTTCCATTAGAATTCAAATAGTTTACGTCTTACATCATCTCCTTTTCCGGTCATCAACTACTTATATTATCCCATGATTACCTA

24,225

MATR3

MATR3-201

MATR3-201

TATTAGTAACTATAAATTATGATCCTTAGGTAGTAATTGTCATTATACTACTATAAAAAGTTGTAAAAGGAAAAATTCGTGGAAAG
ATAATCATTGATATTTAATACTAGGAATCCATCATTAAACAGTAATATGATGATATTTTCAACATTTTCTTTTAAGACACCTTTTC

24,310

MATR3

MATR3-201

MATR3-201

CCATTTTCAGATCTATACCAAAATGATGGTTTTCAAGTCATTATTTTTAGTCCAATTGGCATAGTAAATGATAAAGTAATGCAGTAG
GGTAAAGTCTAGATATGGTTTTACTACCAAGTTTCAGTAATAAAAATCAGGTTAACCGTATCATTACTATTTTCATTACGTCATC

24,395

MATR3

MATR3-201

MATR3-201

AAAAATTAATCTGAGGTGGCCTTTGTAATAAAAATAGCAAATTGGCAACACTGTTTTTTTGGGGTTTTTTTTGTTTTCTTTGTTTTGGGA
TTTTAATTAGACTCCACCGGAAACATTATTTTATCGTTTAACCGTTGTGACAAAAAACCCCAAAAAAACAAAGAAACAAAACCT

24,480

MATR3

MATR3-201

MATR3-201

GTCGGAGTCTCGCTCTGTCACCCAGGCTGGAGTGCAGTGGCGCGATCTCAGCTCACTGCAACCTTCGCCTCCTGTGTTCAAGCGA
CAGCCTCAGAGCGAGACAGTGGGTCCGACCTCACGTACC CGCTAGAGTCGAGTGACGTTGGAAGCGGAGGACACAAGTTCGCT

24,565

MATR3

MATR3-201

MATR3-201

TTCTCCTACCTCAGCCTCCCAAGTAGCTGGGATTACAGCCGCCCACTATCATGCTCAGCTGATTTTTGTATTTTTAGTAGAGATG
AAGAGGATGGAGTCGGAGGGTTTCATCGACCCTAATGTCGGCGGGTGATAGTACGAGTCGACTAAAAACATAAAAAATCATCTCTAC

24,650

MATR3

MATR3-201

MATR3-201

GGGTTTCACCATGTTGGCCAGGCTGGTCTCGAAGTCCTGACCTCAGGTGATCCACCCGCCTTGGCCTCCCAAAGTGCTGGGATTA
CCCAAAGTGGTACAACCGGTCCGACCAGAGCTTCAGGACTGGAGTCCACTAGGTGGGCGGAACCGGAGGGTTTCACGACCCTAAT

24,735

MATR3

MATR3-201

MATR3-201

CAGGCGTCGGCCATTACACCCGGCCAACATTTTTGTTTCGTTTGTGTTTTGTTTTGTTTTGTTTGTGTTTGAAGTGTCACTCTGTCACCTGG
GTCCCGCAGCCGGTAATGTGGGCCGGTTGTA AAAACAAGCAAACA AAAACA AAAACA AAAACA CAAAACTCACAGTGAGACAGTGGACC

24,820

MATR3

MATR3-201

MATR3-201

GCTGGAGTGCAGTGAGGTTCACTGCAGCCTCCACCTCCCAGGTTCAAGCCATTCTCCTGCCTCAGCCTCCTCCCAAGTAGCTGGG
CGACCTCACGTCACTCCAAGTGACGTCGGAGGTGGAGGGTCCAAGTTCGGTAAGAGGACGGAGTTCGGAGGAGGGTTTCATCGACCC

24,905

MATR3

MATR3-201

MATR3-201

ACTACAGACGTCCACCATTACGCCCAGCTAATTTTTGTATTTTTAGTAGAGACGGGGTTTCACCATGTTGGTTCGGCCAGGATGGT
TGATGTCTGCAGGTGGTAATGCGGGTCGATTA AAAACA AAAACA AAAACA AAAACA CAAAACTGGAACAACAGCCGGTTCCTACCA

24,990

MATR3

MATR3-201

MATR3-201

CTTGATCTTTCAACCTCGTGATCCGCCTGCCTCGGCCTCCCGAAGTGTGGGATTACAGGCATGAGATACTGGGCCAGCCTCTT
GAACTAGAAAAGTTGGAGCACTAGGCGGACGGAGCCGGAGGGCTTCAACAACCTAATGTCCGTA CTCTATGACCCGGGTCGGAGAA

25,075

MATR3

MATR3-201

MATR3-201

TTGTTTTGTATTTTGATTCTTGAAAGTATTTTCTACTTAATGATTAAATATATCTGAAAAGATTTGGGGCATTGTTATTTTTTAG
AACAAAACATAAACTAAGAACTTTCATAAAAGATGAATTACTAATTTATATAGACTTTTCTAAACCCCGTAACAATAAAAAATC

25,160

MATR3

MATR3-201

MATR3-201

GAAAAAAATCTTTAGTTCAATGTGAGAAAGCTGATTGGAAAAACAGAGAAATAACTTTTTGTATAATTT CAGGCATTTATTGA
CTTTTTTTTAGAAATCAAGTTACTCTTTTCGACTAACCTTTTTGTCTCTTTATTGAAAAACATATTAAAGTCCGTAATAACT

25,245

MATR3

MATR3-201

MATR3-201

A F I E
ENSE00003765...

AATGGCAACCACAGAGGATGCTCAGGCCGAGTGGATTATTACACAACCACACCAGCGTTAGTATTTGGCAAGCCAGTGAGAGTT
TTACCGTTGGTGTCTCCTACGAGTCCGGCGTCACTAATAATGTGTTGGTGTGGTTCGCAATCATAAACCGTTCGGTCACTCTCAA

25,330

MATR3

MATR3-201

MATR3-201

M A T T E D A Q A A V D Y Y T T T P A L V F G K P V R V

ENSE00003765367

CATTTATCCCAGAAGTATAAAAGAATAAAGGTAATGTTTATTTTTTTCAAGCTGTATATCAGTTTAAACAAATGATTTTAAATAGTT
GTAAATAGGGTCTTCATATTTCTTATTTCCATTACAAATAAAAAAGTTTCGACATATAGTCAAATTGTTTACTAAAATTATCAA

25,415

MATR3

MATR3-201

MATR3-201

H L S Q K Y K R I K

ENSE00003765367

ATTAAGTGTGGTTATTTCAAATTATTGCTAAGGCCAGGTGTGGTGGCTCACGCCTGTAATCCCAGCACCTTGGGAGGCCAAGGTC
TAATTGACACCAATAAAGTTTAAATAACGATTCCGGTCCACACCACCGAGTGCGGACATTAGGGTCTGGAACCCCTCCGGTTCAG

25,500

MATR3

MATR3-201

MATR3-201

AGAAGGATTATGTGAGGCCAGGAGTTCCAGGCAAGCCTGGGCAACATAGCAAGACCTCGTCTCTATAAAAAATAAAACAATTGGT
TCTTCCTAATACACTCCGGGTCCCAAGGTCCGTTCCGGACCCGTTGTATCGTCTGGAGCAGAGATTTTTTATTTTGTAAACCA

25,585

MATR3

MATR3-201

MATR3-201

AAAGACTAGGATGTTTTAACTGTAACTAATAATTATTGCACATTTGTCCTTTTGTGTTGTTATTTATTAAGAAACCTGAAG
TTTCTGATCCTACAAAAATTGACAATTGATTATTAATAACGTGTAACAGGAAAAACAACAATAAATAATTTCTTTGGACTTC

25,670

MATR3

MATR3-201

480
K P E
ENSE0000377...

MATR3-201

GAAAGCCAGATCAGAAGTTTGATCAAAAGCAAGAGCTTGGACGTGTGATACATCTCAGCAATTTGCCGCATTCTGGCTATTCTGA
CTTTCGGTCTAGTCTTCAAACCTAGTTTTCGTTCTCGAACCTGCACACTATGTAGAGTCGTTAAACGGCGTAAGACCGATAAGACT

25,755

MATR3

MATR3-201

G K P D Q K F D Q K Q E L G R V I H L S N L P H S G Y S D
485 490 495 500 505 510

ENSE00003770784

MATR3-201

TAGTGCTGTTCTCAAGCTTGCTGAGCCTTATGGGAAAATAAAGAATTACATATTGATGAGGATGAAAAGTCAGGTAATATACATA
ATCACGACAAGAGTTCGAACGACTCGGAATACCCTTTTATTCTTAATGTATAACTACTCCTACTTTTCAGTCCATTATATGTAT

25,840

MATR3

MATR3-201

S A V L K L A E P Y G K I K N Y I L M R M K S Q
515 520 525 530

ENSE00003770784

MATR3-201

AGGAAGTTTTAGAGAAGATAATTTATTAATAATCCTTAAGATTTTTCAATATGGAGCTGGGCGTCATTCTCAACCTGTAATCCCA
TCCTTCAAATCTCTTCTATTAATAATTTTAGGAATCTAAAAAGTTATACCTCGACCCGCGAGTAAGGAGTTGGACATTAGGGT

25,925

MATR3

MATR3-201

MATR3-201

GCAGTTTGGGAGGCCAAGGCAGGCAAATCACCTGAGGTCAGGAGTTTCGAGACCAGCCTGGCCAGCATGGTGAAATCGTATCTCTA
CGTCAAACCCTCCGGTCCGTCGGTTTAGTGGACTCCAGTCTCAAGCTCTGGTCCGACCCGGTTCGTACCACTTTAGCATAGAGAT

26,010

MATR3

MATR3-201

MATR3-201

TTAAAAATACAAAAATTATCCAGGCGTGATGTGCCTGTAATCCAGCTACTTGGGAGGCTGAGGCAGGAGAATTGCTTAACTGGC
AATTTTTATGTTTTAATAGGTCCGCACTACACGGACATTAGGGTCGATGAACCCTCCGACTCCGTCCTCTTAACGAATTGACCG

26,095

MATR3

MATR3-201

MATR3-201

AGGGGGCGGAGGTTGCAGTGAGCTGAGATTGCACCACTGCACCTCCAGCCTGGGCAGCAGAGCGAGACTCCCAACTCAAAAAAAAA
TCCCCCGCCTCCAACGTCACCTCGACTCTAACGTGGTGACGTGAGGTCGGACCCGTCGTCTCGCTCTGAGGGTTGAGTTTTTTTTT

26,180

MATR3

MATR3-201

MATR3-201

AATTTGCTTTAAAGTATATCCCTATTTTTTAGTGATGAAATCTGGAGGACTAGTTGTTTGC
TTAAACGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAATTTTCATATAGGGATAAAAAATCACTACTTTAGACCTCCTGATCAACAAACG

26,265

MATR3

MATR3-201

MATR3-201

TTTTCTTTTCTTTTTTTTTTTTTTTTTTTTTGAGACAGGGTCTCAAAAATTAATATTTTCATACTTTTTTTTTCTTGTATTTAAAAATATAGA
AAAAGAAAAGAAAAAAAAAAAAAAAAAACTCTGTCCAGAGTTTTTAATTATAAAGTATGAAAAAAAAAGAACATAAATTTTTTATATCT

26,350

MATR3

MATR3-201

MATR3-201

GTTAGCCAGTCGCAGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCAGGAGGCAGGCAGATCACGAGGTCAGGAGATTGAGA
CAATCGGTCAGCGTCACCGAGTGCAGGACATTAGGGTCGTGAAACCCCTCCGCCTCCGTCCGTCTAGTGCTCCAGTCCTCTAACTCT

26,435

MATR3

MATR3-201

MATR3-201

TCATCCTGGCTAACACAGTGAAACCCCTCTCTCCTAAAAATACAAAAAATTAGCTGGGCGTGTTGGGCGTGCGCCTGTTGTCCC
AGTAGGACCGATTGTGTCACTTTGGGGGAGAGAGGATTTTTATGTTTTTTAATCGACCCGCACCACCGCACGCGGACAACAGGG

26,520

MATR3

MATR3-201

MATR3-201

AGCTGTTGGGGAGGCTGAGGCAGGAGAATGGCATGAACCCGGGAGGCGGAGCTTGCAATGACTCGAGATTGTGCCACTGCACCCA
TCGACAACCCCTCCGACTCCGTCTCTTACCGTACTTTGGGCCCTCCGCCTCGAACGTTACTGAGCTCTAACACGGTGACGTGGGT

26,605

MATR3

MATR3-201

MATR3-201

TCCTGGGTGACAGAGCAAGACTCCATCTCAAAAAAAAAAATTTAGAGTTAGGCTGGATGCATTGGCTCATGCCTGTAAATCCCTA
AGGACCCACTGTCTCGTTCTGAGGTAGAGTTTTTTTTTTTTTAAATCTCAATCCGACCTACGTAACCGAGTACGGACATTTAGGGAT

26,690

MATR3

MATR3-201

MATR3-201

GACATTGGGAGGCTGAGGCCAGAGTTGCCAGGAGTTTGGACCGCCCTGACAACATATTGAGGCCACATCTGTACAAAAAAAAA
CTGTAACCCCTCCGACTCCGGTCTCAACGGGTCTCAAACTCTGGCGGGACTGTTGTATAACTCCGGTGTAGACATGTTTTTTTTT

26,775

MATR3

MATR3-201

MATR3-201

TTTTTTTAAACCAGGCAAAGTGGCATGCTCGTACAGTTTTAGCTACGGGAGTCTGAAGTCAGGTGGAACACTTAACCCAGGAGTC
AAAAAAAAATTGGTCCGTTTTACCCTACGAGCATGTCAAAATCGATGCCCTCAGACTTCAGTCCACCTTGTGAATTGGGTCTCTCAG

26,860

MATR3

MATR3-201

MATR3-201

CAAGGTTTGTAGTGGGCTATGATTGTGCCACTGTACTTCAGCATAGGCAGTGGAGTGAGACCCTGTCTCAAAAAGGAAATAAGGA
GTTCCAAACATCACCCGATACTAACACGGTGACATGAAGTCGTATCCGTACCTCACTCTGGGACAGAGTTTTTCTTTTATTCTT

26,945

MATR3

MATR3-201

MATR3-201

TGAGGAGAACATCTTTTTTGTCTTTTCTTTTTTGTCTTAAACACTTCTGTAAATTCAGCATTGCAAGTTTGTGTTCTTCCAGACTT
ACTCCTCTTGTAGAAAAAACAAAAAGAAAAAACAAAAATTTGTGAAGACATTAAGTCGTAACGTTCAAACACAAGAAGGTCTGAA

27,030

MATR3

MATR3-201

MATR3-201

TTATTTTTCTTACACTATTTTAATATCTTAAGCTTATTACTTTTTTTTTTTTTTTTTTTTTTTTTTTTGGAGACAGAGTCTCGCTCTGTCAC
AATAAAAAGAATGTGATAAAATTATAGAATTCGAATAATGAAAAAAAAAAAAAAAAAAAAAAAACTCTGTCTCAGAGCGAGACAGTG

27,115

MATR3

MATR3-201

MATR3-201

CCCGGCTGTAGTGCAGTGGTGCAATCTCAGCTTACTGCAAGTTCTGCCTCCCCGGTTCATGGCATTCTCCTGCCTCAGCTTCCCC
GGGCCGACATCACGTCACCACGTTAGAGTCGAATGACGTTCAAGACGGAGGGGGCCAAGTACCGTAAGAGGACGGAGTTCGAAGGGG

27,200

MATR3

MATR3-201

MATR3-201

AGTAGCTGGGACCACAGGCACCCGCCACCACGCCTGGCTAATTTTTTTTTTTTTTTTTTTTTTTTGTATTTTTACTAGAGACGGGTTTCA
TCATCGACCCTGGTGTCCGTGGGCGGTGGTGCAGGACCGATTAAAAAAAAAAAAAAAAAAAAAAAAACATAAAAATGATCTCTGCCCAAAGT

27,285

MATR3

MATR3-201

MATR3-201

CCATCCACAGGATGGTCTCGATCCCCTGACCTTGTGATCCGCCCGTCTCGGCCTCCCAAAGTGCTGGGATTACAGGCTGAGCCAC
GGTAGGTGTCTACCAGAGCTAGGGGACTGGAACACTAGGCGGGCAGAGCCGGAGGGTTTACAGACCCTAATGTCCGACTCGGTG

27,370

MATR3

MATR3-201

MATR3-201

CGCGCCCAGCCAGCTTATTACTTTTTTGCAGAGTGTATATAGATGGCTTAGTATTTGGCACTAAAAGTGATTCTTGGGGATTTTGT
GC GCGGGTTCGGTCGAATAATGAAAAACGTCTCACATATATCTACCGAATCATAAACCGTGATTTCACTAAGAACCCTAAAAACA

27,455

MATR3

MATR3-201

MATR3-201

AAATCTGACAGGTTGGTTTTTTGGTTTTTTGGTTTTTTCTGAGATGGAGTCTTGCTCTGTGCGCCAGTCTAGAGTGCAGTGGTGCC
TTTAGACTGTCCAACCAAAAAACCAAAAAACCAAAAAAGACTCTACCTCAGAACGAGACAGCGGGTCAGATCTCACGTCAACCACGG

27,540

MATR3

MATR3-201

MATR3-201

ATCTTGGCTTGCTATAAACTCCGCCTCCTGGGTTCAAGCAGTTCTCCTATGTCAGCCTTCCAAGTAGCTGGTACTACAGTAGGCA
TAGAACCGAACGATATTTGAGGCGGAGGACCCAAGTTCGTCAAGAGGATACAGTCGGAAGGTTTCATCGACCATGATGTCATCCGT

27,625

MATR3

MATR3-201

MATR3-201

CACTCCACCAGGCCAGCTGATTTTTGCATTTGTAGTAGAGATGGGGTTTACCATACTGGTCAGGCTGTTCTCGGAATTCCTGA
GTGAGGTGGTCCGGGTCGACTAAAAACGTAAACATCATCTCTACCCCAAAGTGGTATGACCAGTCCGACAAGAGCCTTAAGGACT

27,710

MATR3

MATR3-201

MATR3-201

CCTCAGGTGAGCCACCCGCCTTGGCCTCCCAAAGTGTGGGATTACAGGTGTGAGCCACTGCGCCAGCCCTGATATTCAGTGAA
GGAGTCCACTCGGTGGGCGGAACCGGAGGGTTTTACAACCTAATGTCCACACTCGGTGACGCGGGTCCGGGACTATAAGTCACTT

27,795

MATR3

MATR3-201

MATR3-201

TTTTTAACTCTGTGCTAAAGATTAAAATTTTTAGCCGGGTGTGGTTGCTGTACCTGTAATCCCAGCACTTTGTGAGGCCAAAGC
AAAAATTGAGACACGATTTCTAATTTTAAAAATCGGCCACACCAACGACAGTGGACATTAGGGTTCGTGAAACACTCCGGTTTTCG

27,880

MATR3

MATR3-201

MATR3-201

AGGAGGATTGCCTGAGTCCAGGAGCCCGAGACCAGTCTAGGCAACATGGCGAAACTGCACCTCTACAAAAAATACAAAAATTAGC
TCCTCCTAACGGACTCAGGTCCCTCGGGCTCTGGTCAGATCCGTTGTACCGCTTTGACGTGGAGATGTTTTTTATGTTTTTAATCG

27,965

MATR3

MATR3-201

MATR3-201

CAGGCATTGGTGGTGCATGCCTGTAGACCTAGCTACTGGGGGGGCTAAGGTGGGAGGATCAGTTGGGCCCAGTACATCAACGCTTC
GTCCGTAACCACCACGTACGGACATCTGGATCGATGACCCCCCGATTCCACCCTCCTAGTCAACCCGGGTTCATGTAGTTGCGAAG

28,050

MATR3

MATR3-201

MATR3-201

AGCAAGCCAGGATTGCGCCACTGCATTCCAGCCTGGGTGACACAGTGAGACCCTGTCTCAAAAAAGAAAAAAGTAATGAAAATT
TCGTTCCGGTCTTAACGCGGTGACGTAAGGTCCGACCCACTGTGTCACTCTGGGACAGAGTTTTTTCTTTTTTTCATTACTTTTTAA

28,135

MATR3

MATR3-201

MATR3-201

TTCTAACAGTAGGTAGAATACATAATAAGGTTTTATACAATTTTGTAAATATAATGTGCTTTGTGGTTTTCTTTCTTTCTTTT
AAGATTGGTTCATCCATCTTATGTATTATTCCAAAATATGTTAAACATTTTATATTACACGAAACACCAAAGAAAAAGAAAGAAAA

28,220

MATR3

MATR3-201

MATR3-201

TAAGGCTTTTATTGAGATGGAGACAAGAGAAGATGCAATGGCAATGGTTGACCATTGTTTGAAAAAGCCCTTTGGTTTTCAGGGG
ATTCCGAAAATAACTCTACCTCTGTTCTTCTACGTTACCGTTACCAACTGGTAACAACTTTTTTTCGGGAAACCAAAGTCCCC

28,305

MATR3

MATR3-201

535 540 545 550 555 560
A F I E M E T R E D A M A M V D H C L K K A L W F Q G

ENSE00003765354

MATR3-201

AGATGTGTGAAGGTTGACCTGTCTGAGAAATATAAAAACTGGTTCTGAGGGTATGTAGTATTTGATTTGTCATCATTAAACAGC
TCTACACACTTCCAACCTGGACAGACTCTTTATATTTTTTGACCAAGACTCCCATACATCATAAACTAAACAGTAGTAAATTGTCG

28,390

MATR3

MATR3-201

565 570 575
R C V K V D L S E K Y K K L V L R

ENSE00003765354

MATR3-201

TTGTTTTTACATATTTAAAGCCACAACATTCTTTTAAACATTTTGTATGCTAAAAATACAGGATTATTGAAACCTATTGAAATA
AACAAAAATGTATAAATTTCCGGTGTGTAAGAAAAATTTGTA AAAACATACGATTTTTATGTCCTAATAACTTTGGATAACTTTTAT

28,475

MATR3

MATR3-201

MATR3-201

AGTTATTGAAAGAGAACAACCTTTTTTCTGGTCTTTAATGGCAGAAGTTTTTAAACGAGTCTTCCCTAAAGGACACCTTCATTG
TCAATAACTTTCTCTTGTGGAAAAAAGACCAGAAATTACCGTCTTCAAAAAATTTGCTCAGAAGGGATTTCCTGTGGAAGTAAC

28,560

MATR3

MATR3-201

MATR3-201

CTCTTATCTGTTTAAAGTTTTTTCATAGCGTTCTGCTACCAGAATGTTTTATTTTCCACTTCTCTGTTGGTATGGTCATGATGAATG
GAGAATAGACAAATTCAAAAAGTATCGCAAGACGATGGTCTTACAAAATAAAAAGGTGAAGAGACAACCATAACCAGTACTACTTAC

28,645

MATR3

MATR3-201

MATR3-201

TCTGTAGGCAGCTTAGGTTCTCAAATAAGGTTACGGGAATTGAATAAGCTGAGTTGATTATAGGGATTGTCTCCAATTATTAATT
AGACATCCGTGCAATCCAAGAGTTTATTCCAATGCCCTTAACTTATTGACTCAACTAATATCCCTAACAGAGGTTAATAATTAA

28,730

MATR3

MATR3-201

MATR3-201

CACTGGATAATTGTGTATTCTGCAAATGTGTTAACTTCTGCAAACCTTTTGTCTTTTAGATTCCAAACAGAGGCATTGATTTACT
GTGACCTATTAACACATAAGACGTTTACACAATTGAAGACGTTTTGAAAACAGAAAATCTAAGGTTTGTCTCCGTAACATAAATGA

28,815

MATR3

MATR3-201

MATR3-201

580 585
I P N R G I D L L
ENSE00003771409

GAAAAAGATAAATCCCGGTAATTTCAATTTGTTTTTCATATGTGTGAGTATATTCAACTTTACTTTTTTCAGACAACAAATTAAT
CTTTTTTCTATTTAGGGCCATTAAAGTAAAACAAAAAGTATACACACTCATATAAGTTGAAATGAAAAAGTCTGTTGTTTAATTA

28,900

MATR3

MATR3-201

MATR3-201

590
K K D K S R
ENSE00003771409

TGTGGTGTGTCCTTTTGATTTTCAGAAAAAGATCTTACTCTCCAGATGGCAAAGAATCTCCAAGTGATAAGAAATCCAAAACCTGAT
ACACCACACAGGAAAACCTAAAGTCTTTTTCTAGAATGAGAGGTCTACCGTTTCTTAGAGGTTCACTATTCTTTAGGTTTTGACTA

28,985

MATR3

MATR3-201

MATR3-201

595 600 605 610
K R S Y S P D G K E S P S D K K S K T D
ENSE00003768022

GGTTCCAGAAAGACTGAGAGTTCAACCGAAGGTAAGAACAAGAAGAGAAGTCCGGTGAAGATGGTGAGAAAGACACAAAGGATG
CCAAGGGTCTTCTGACTCTCAAGTTGGCTTCCATTTCTTGTCTTCTCTCAGGCCACTTCTACCCTCTTTCTGTGTTTCTTAC

29,070

MATR3

MATR3-201

MATR3-201

615 620 625 630 635 640
G S Q K T E S S T E G K E Q E E K S G E D G E K D T K D
ENSE00003768022

ACCAGACAGAGCAGGAACCTAATATGCTTCTTGAATCTGAAGATGAGCTACTTGTAGATGAAGAAGAAGCAGCAGCACTGCTAGA
TGGTCTGTCTCGTCCTTGGATTATACGAAGAACCTAGACTTCTACTCGATGAACATCTACTTCTTCTTCTCGTCTGTCGTGACGATCT

29,155

MATR3

MATR3-201

MATR3-201

645 650 655 660 665 670
D Q T E Q E P N M L L E S E D E L L V D E E E A A A L L E
ENSE00003768022

AAGTGGCAGTTTCAGTGGGAGACGAGACCGATCTTGCTAATTTAGGTGATGTGGCTTCTGATGGGAAAAAGGAACCATCAGATAAA
TTCACCGTCAAGTCAACCCTCTGCTCTGGCTAGAACGATTAATCCACTACACCGAAGACTACCCCTTTTTCTTGGTAGTCTATTT

29,240

MATR3

MATR3-201

S G S S V G D E T D L A N L G D V A S D G K K E P S D K

ENSE00003768022

MATR3-201

GCTGTGAAAAAAGATGGAAGTGCTTCAGCAGCAGCAAAGAAAAAGCTTAAAAAGGTAAAGAAAGATACATTGATTTGTTTTAATA
CGACACTTTTTTCTACCTTCACGAAGTCGTCGTCGTTTCTTTTTCGAATTTTTCCATTTCTTTCTATGTAACATAAACAAAATTAT

29,325

MATR3

MATR3-201

A V K K D G S A S A A A K K K L K K

ENSE00003768022

MATR3-201

GAACATTAGATCAGATCAGTATTTCAAGTTATTTACCTAAGCAGGATCAGATAGAATTATATGATTTAAATCAGAAAAATAAATCA
CTTGTAATCTAGTCTAGTCATAAAGTTCAATAAATGGATTTCGTCCTAGTCTATCTTAATATACTAAATTTAGTCTTTTATTTAGT

29,410

MATR3

MATR3-201

MATR3-201

GATATGAACCAGAATATAAACATTTAAATCTAAACTCTGCAATAAATAAATTAAATAAGACATTTTTATTATAGTTGGCAAAAAACA
CTATACTTGGTCTTATATTTGTAAATTTAGATTTGAGACGTTATTTATTAATTTATTCTGTAAAATAATATCAACCGTTTTTTGT

29,495

MATR3

MATR3-201

MATR3-201

TCAGCTCAAAGAGGAAACTTTTTAGTAAAAATGAGGGAGAAAGACTCAAAAATATATGTGCTTCTGTATTGTAGTGGTGTAGTGGT
AGTCGAGTTTCTCCTTTGAAAAGTCATTTTTACTCCCTCTTTCTGAGTTTTATATACACGAAGACATAACATCACCACATCACCA

29,580

MATR3

MATR3-201

MATR3-201

AGCATATAGGTAGGCAGCCTTATAGTGTAGCTTTGAAAAAATAACAGGACGTGAGTTTGCAGTAAGTTAACTGACCCAACAT
TCGTATATCCATCCGTCGGAATATCACATCGAAACTTTTTTTTTATGTCCTGCACTCAAACGTCATTCAATTGACTGGGTTGTA

29,665

MATR3

MATR3-201

MATR3-201

AGTTAAACTTTTTGCCACTCATTCAAAAATTATTGAATAATTTTTCTATTTGAGAAATGTTGGCCTGGTCAGATACCTTAGTAT
TCAATTTTGAAAACGGTGAGTAAGTTTTTAATAACTTATTAATAAAGGATAAACTCTTTACAACCGGACCAGTCTATGGAATCATA

29,750

MATR3

MATR3-201

MATR3-201

CCTTTAAAAACAATTTTATTTGAACAAGTAAGTCATTTAGAAAGCCATGTATAAAGTGAATATAAAATATAAAAAATACACACATGCTA
GGAAATTTTGTAAAAATAAACTTGTTCATTCAGTAAATCTTCGGTACATATTTCACTTATATTTTATATTTTTATGTGTGTACGAT

29,835

MATR3

MATR3-201

MATR3-201

TAAAGAAGAGTAAACAAAGGACCCACATTGAGCTGACTGCCTAGCTTAAGGAGTAGGGCATTAAAATGCCTTTGAGGCAAACCTTT
ATTTCTTCTCATTTGTTTCTGGGTGTAACCTGACTGACGGATCGAATTCCTCATCCCGTAATTTTACGGAAACTCCGTTTGAAA

29,920

MATR3

MATR3-201

MATR3-201

TTATGTTAAATGGCTCATAAAATGTCGGAGTCAGGCGGGCCAGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCCAGCA
AATACAATTTACCGAGTATTTTACAGCCTCAGTCCGCCCGGGTCAACGAGTGCAGGACATTAGGGTCGTGAAACCTCCGGGTCGT

30,005

MATR3

MATR3-201

MATR3-201

GATCAGTTGAGGCCAGGAGTTCAAGACCAACATGGTGAAACCCCGTCTCTACTAAAAATATGAAAATTAGCCGGGCGTGGTGGCA
CTAGTCAACTCCGGTCTCAAGTTCTGGTTGTACCACTTTGGGGCAGAGATGATTTTTATACTTTTAATCGGCCCGCACCACCGT

30,090

MATR3

MATR3-201

MATR3-201

CATACCTGTAGCAGCTACTTGGAAAGGCTGAGACAGGAGAATTGCTTGAATCTGGGAGGCAGAAAGTTGCAGTTAGCCAAGATCACA
GTATGGACATCGTTCGATGAACCTTCCGACTCTGTCTCTTAACGAACTTAGACCCTCCGTCTTCAACGTCAATCGGTTCTAGTGT

30,175

MATR3

MATR3-201

MATR3-201

TCACTGTACTCCAGCCTGGGTGACAAGAGCAAGACTGTCTCAAGAAAAAAAAAAGTAGAGCGAAATGAGATTTTTGCCATCCTA
AGTGACATGAGGTCGGACCCACTGTTCTCGTTCTGACAGAGTTCTTTTTTTTTTTCATCTCGCTTTACTCTAAAAACGGTAGGAT

30,260

MATR3

MATR3-201

MATR3-201

TTCCATATTCCATTGGTTCCTTTTATGCAACATTCAACTCAAACCAATATTTACCTCAGTTTTTATTTGATGGCTTGGTCAAAT
AAGGTATAAGGTAACCAAGGAAAAATACGTTGTAAGTTGAGTTTTGGTTATAAATGGAGTCAAAAAATAAATACCGAACCAAGTTTA

30,345

MATR3

MATR3-201

MATR3-201

AACTTCATTAATTTTTCTCACTAGAGCTGATCATTATGTTTACATTTGTAAATGCTAATAATTACTGATGTTTATGGCATTTAAT
TTGAAGTAATTA AAAAGAGTGATCTCGACTAGTAATACAAATGTAAACATTTACGATTATTAATGACTACAAATACCGTAAATTA

30,430

MATR3

MATR3-201

MATR3-201

GCCATACGTTTTTCTAAGTTTAAATTTATTAATTTAATCCTCACAGTAACCATATGCATCTCATACTGTGATCTCCAGTCCATAA
CGGTATGCAAAAAGATTCAAATTTAAATAATTAATTAGGAGTGTCATTGGTATACGTAGAGTATGACACTAGAGGTCAGGTATT

30,515

MATR3

MATR3-201

MATR3-201

ATGAGGAAAATTGAAATATGGAGAAGTTAAATAATCCCATACTGCTTATAAGACACAGAGCCAAAATTTAAACTTGGGCAGTCAT
TACTCCTTTTAACTTTATACCTCTTCAATTTATTAGGGTATGACGAATATTCTGTGTCTCGGTTTTAAATTTGAACCCGTCAGTA

30,600

MATR3

MATR3-201

MATR3-201

TCTTCAGAGCATGATTGTTTTTTTTTTTTTTTTTTTTTTGGAGACGGAGTCTTGCTCTGTTGCCCAGGCTGGAGTGCGGTGGTGTGA
AGAAGTCTCGTACTAACAAAAAAAAAAAAAAAAAAAAAACCCTCTGCCTCAGAACGAGACAACGGGTCCGACCTCACGCCACCCACT

30,685

MATR3

MATR3-201

MATR3-201

TCTCAGCTAACTGCAACCTCCACCTCCAGGTTCAAGTTCTGCTGCCTCAGCCTCCCAAGTAGCTGGGATTACAGGTGTCCACCA
AGAGTCGATTGACGTTGGAGGTGGAGGGTCCAAGTTCAAGACGACGGAGTCGGAGGGTTCATCGACCCTAATGTCCACAGGTGGT

30,770

MATR3

MATR3-201

MATR3-201

CCACACGAGGCTAATTCTTGATTTTTAGTAGAAACGAGGTTTCGCCATGTTGGCCTGGCTGGTATTGAACTCCTGAGATCTCAG
GGTGTGCTCCGATTAAGAACATAAAAAATCATCTTTGCTCCAAAGCGGTACAACCGGACCGACCATAAATTGAGGACTCTAGAGTC

30,855

MATR3

MATR3-201

MATR3-201

GGTGATCCGCCCACCTCAGCCTCCCAAAGTGCTGGAATTACAGGTGTGAGCCACCATGCCTGGCCCAGAGCTTGGTTTTTTAGCC
CCACTAGGCGGGTGGAGTCGGAGGGTTTACGACCTTAATGTCCACACTCGGTGGTACGGACCGGGTCTCGAACCAAAAAATCGG

30,940

MATR3

MATR3-201

MATR3-201

ATTACACTGTTTGGAGTATTTGCTCTAAAGAGTAGGTATTTGCAGTATACTGTCTTACAAAGGATATTGCTCAACTTTTACCAAAT
TAATGTGACAAACTCATAAACGAGATTTCTCATCCATAAACGTCATATGACAGAATGTTTCTATAACGAGTTGAAAATGGTTTA

31,025

MATR3

MATR3-201

MATR3-201

CAAGTTTTTTTACACATTGCCTAGCAGCATTGTAGTCTCAGAAAAGATAAAAATATGAATATTCCTATCTCATTAACTTCTGCTCT
GTTCAAAAAATGTGTAACGGATCGTCGTAACATCAGAGTCTTTTCTATTTTATACTTATAAGGATAGAGTAAATTGAAGACGAGA

31,110

MATR3

MATR3-201

MATR3-201

TTGTGTGAGGCAGACCTTCCATTTTTTAGTTTTTAAATAAGCTAAATTATTTTTCAAATTATCAGTAATTTTTTGGAAAGAAAGGA
AACACACTCCGTCTGGAAGGTAAAAAATCAAAATTTTATTTCGATTTAATAAAAAGTTTAATAGTCATTAAAAAACCTTCTTTTCT

31,195

MATR3

MATR3-201

MATR3-201

AGAAGTTACTATTTTTGAGCCAATGAATAAAGACAAAGACGCGGCCGGGCACGGTGGCTCACGCCTGTAATCCTAGCACTTTGGGA
TCTTCAATGATAAAACTCGGTTACTTATTTCTGTTTCTGCGCCGGCCCGTGCCACCGAGTGCGGACATTAGGATCGTGAAACCTT

31,280

MATR3

MATR3-201

MATR3-201

GGCCGAGGTGGGTGGATCACGAGGTCAGGAGATCGAGACCATCCTGGCTAACACAGTGAAACCCCGTCTCTACTAAAATTACAAA
CCGGCTCCACCCACCTAGTGCTCCAGTCTCTAGCTCTGGTAGGACCGATTGTGTCACTTTGGGGCAGAGATGATTTTAATGTTT

31,365

MATR3

MATR3-201

MATR3-201

AAAAATTAGCCGGGCGTGGTGGCGTGCGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAGGAGAATGGCGTGAACCAGGGAGG
TTTTTAATCGGCCCGCACCACCGCACGCGGACATCAGGGTTCGATGAGCCCTCCGACTCCGTCTCTTACCAGCACTTGGTCCCTCC

31,450

MATR3

MATR3-201

MATR3-201

CGGAGGTTGCAGTGAGCCGAGATCGCGCCACTGCACCCCAGCCTGGTTCGACAGAGCAAGACTCCGTCTCAAAAAAAAAAAGGCAA
GCCTCCAACGTCACTCGGCTCTAGCGCGGTGACGTGGGGTCGGACCAGCTGTCTCGTTCTGAGGCAGAGTTTTTTTTTTTCCGTT

31,535

MATR3

MATR3-201

MATR3-201

AGACGCTATCCGTTTTCCCTTCAAGTAAAGCAGACAGAAGGGATGCTGCAGGATAATTGTTGCAGAGTAAATTTGTCTTTCTTAAC
TCTGCGATAGGCCAAAGGGAAGTTCATTTTCGTCTGTCTTCCCTACGACGTCTTATTAACAACGTCTCATTTAAACAGAAAAGAATTG

31,620

MATR3

MATR3-201

MATR3-201

AGCGTCGTTTTCCAGGGAGTATGGAAGGTTTTGTCACTCTAGATGAGGTTGGTGATGAGGAAGATTCGGAACCTTCAGAACTTCG
TCGCAGCAAAAAGGTCCTCATACCTTCCAAAACAGTGAGATCTACTCCAACCACTACTCCTTCTAAGCCTTGAAGTCTTTGAAGC

31,705

MATR3

MATR3-201

MATR3-201

TAAATCGGGCATGGCATTAAATCTGGTGACAAAATGATGATGGTTTGGTTGAAATTAAGGTGGACAAGATCGAGGAACTTGAT
ATTTAGCCCGTACCGTAAATTTAGACCACTGTTTTACTACTACCAAACCAACTTTAATTCCACCTGTTCTAGCTCCTTGAACCTA

31,790

MATR3

MATR3-201

MATR3-201

V D K I E E L D
ENSE00003774904

CAAGAAAACGAAGCAGCGTTGGAAAATGGAATTAATAATGAGGAAAACACAGAACCAGGTGCTGAATCTTCTGAGAACGCTGATG
GTTCTTTTGTTCGTCGCAACCTTTTACCTTAATTTTTACTCCTTTTGTGTCTTGGTCCACGACTTAGAAGACTCTTGCGACTAC

31,875

MATR3

MATR3-201

MATR3-201

Q E N E A A L E N G I K N E E N T E P G A E S S E N A D

ENSE00003774904

ATCCCAACAAAGATACAAGTGAAAACGCAGATGGTCAAAGTGATGAGAACAAGGACGACTATACAATCCCAGATGAGTATAGAAT
TAGGGTTGTTTCTATGTTCACTTTTGCCTCTACCAGTTTCACTACTCTTGTTCCTGCTGATATGTTAGGGTCTACTCATATCTTA

31,960

MATR3

MATR3-201

MATR3-201

D P N K D T S E N A D G Q S D E N K D D Y T I P D E Y R I

ENSE00003774904

TGGACCATATCAGCCCAATGTTCCCTGTTGGTGAGATTTAAGTCTTTGTTCTTCCACTTCCCTCACTCTCCTCAAAAACAACTCTTA
ACCTGGTATAGTCGGGTTACAAGGACAACCACTCTAAATTCAGAAACAAGAAGTGAAGGAGTGAGAGGAGTTTTGTTTGAGAAT

32,045

MATR3

MATR3-201

MATR3-201

G P Y Q P N V P V

ENSE00003774904

GGTTTTAAAATAAGATTTTTAAAGTTGGTCTTACATAAGCTGTGATAGCATTTTTAAATTTGCTTTGTTTCTATGGGGAACAATTTA
CCAAAATTTTATTCTAAAATTTCAACCAGAATGTATTCGACACTATCGTAAAATTTAAACGAAACAAAGATACCCCTTGTTAAAT

32,130

MATR3

MATR3-201

MATR3-201

TAAATCTTAATTGATATATTTTCCTCTCATGCATGTCTCTGATTTTGTATTATTTTCTGTTGTTATTCCACAATGTGTTCCCTTT
ATTTAGAATTAACATATATAAAAAGGAGAGTACGTACAGAGACTAAAACATAATAAAAAGACAACAATAAGGTGTTACACAAGGGAAA

32,215

MATR3

MATR3-201

MATR3-201

TTTCGTAAAATTTCTTGCAAGTTACACGCTTTTGTGTTTTGCTTTTCTGTGTTGTTTTCTGTATTATATTTCTTTTTTTAAGAATA
AAAGCATTTTAAAGAACGTTCAATGTGCGAAAACAAAACGAAAAGACACAACAACAAAAGACATAATATAAAGAAAAAATCTTAT

32,300

MATR3

MATR3-201

MATR3-201

CAGTTAGGTGAGACCTCAAACATCAATTAGGTAAAAGCAAAATATGGTTCGGTTTTTGTGTTTTATCTTAGGCTGTATTGGACTT
GTCAATCCACTCTGGAGTTTGTAGTTAATCCATTTTCGTTTTATACCAAGCCAAAACAAAATAAGAAATCCGACATAACCTGAA

32,385

MATR3

MATR3-201

MATR3-201

CTCAAAAACATGTTGTTTCATTTAAATTATGTTGACAGGTGAAATTGTGAATACTAAATAAAATCTTCAGTTTAAATTTGTAAGAA
GAGTTTTTGTACAACAAAGTAAATTTAATACAACGTCCACTTTAACACTTATGATTTATTTTAGAAGTCAAATTAACATTCTT

32,470

MATR3

MATR3-201

MATR3-201

TGTATGTTTGTATTTCTAGGTATAGACTATGTGATACCTAAAACAGGGTTTTACTGTAAGCTGTGTTCACTCTTTTATACAAATG
ACATACAAAACATAAAGATCCATATCTGATACACTATGGATTTTGTCCAAAATGACATTCGACACAAGTGAGAAAATATGTTTAC

32,555

MATR3

MATR3-201

G I D Y V I P K T G F Y C K L C S L F Y T N

ENSE00003772777

MATR3-201

AAGAAGTTGCAAAGAATACTCATTGCAGCAGCCTTCCTCATTATCAGAAATTAAGGTGAAAGTTGAATGTAAAACAGTTCTTTTG
TTCTTCAACGTTTCTTATGAGTAACGTCGTCGGAAGGAGTAATAGTCTTTAATTTCCATTCCAACCTTACATTTTGTCAAGAAAAC

32,640

MATR3

MATR3-201

E E V A K N T H C S S L P H Y Q K L K

ENSE00003772777

MATR3-201

TGAAAACCTTAACAAGTTATGGAAATAAGTGGGGTATATAAGTAAAATGTGTATAGTGTCTCTCTAGACTCAGTGCAGTGCTTTTC
ACTTTTGAATTGTTCAATACCTTTATTACCCCATATATTCAATTTTACACATATCACAAAGAGAGATCTGAGTCACGTACGAAAAG

32,725

MATR3

MATR3-201

MATR3-201

TCCTGAAGATAACTTTTTATTTACTTTTTTTTTTTTTTTTTTAAAGACAGTTTTCTCTCTTGTGTTGCCAGGTTGGATTGCAATGGTGC
AGGACTTCTATTGAAAAATAAATGAAAAAAAAAAAAAAAAAATTTCTGTCAAAGAGAGAACAACGGGTCCAACCTAACGTTACCACG

32,810

MATR3

MATR3-201

MATR3-201

AATCTTGGCTCACTGCAACCTCTACCTCCTGGGTTCAAGCAATTTTCTGCCTCAGCCTCCCAAGTAGCTGAGATTACAGGCATG
TTAGAACCGAGTGACGTTGGAGATGGAGGACCCAAGTTCGTTAAAAGGACGGAGTCGGAGGGTTCATCGACTCTAATGTCCGTAC

32,895

MATR3

MATR3-201

MATR3-201

CACCACCACACCCAGCTAATTTTTGTATTTTTAGTAGAAATGGGGTTTCACCATGTTGGCTAGCCTGGCTGGTCTTGAACCTCTG
GTGGTGGTGTGGGTCGATTAAAAACATAAAAAATCATCTTTACCCCAAAGTGGTACAACCGATCGGACCGACCAGAACTTGAGGAC

32,980

MATR3

MATR3-201

MATR3-201

ACCTCAGGTGATCCACCCACCTCAGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACCGCGCCTGGCCTTTTCTTTCTTTAT
TGGAGTCCACTAGGTGGGTGGAGTCGGAGGGTTTACGACCCCTAATGTCCGTA CTGGTGGCGCGGACCGGAAAAGAAAATA

33,065

MATR3

MATR3-201

MATR3-201

TGATGGGTTATCAAAACATCTGTTGAACCTCTTGTCATAGTTTACCCTTGCTACATAACAATTTAGTGTTTTCTAACCATATTAT
ACTACCCAATAGTTTTGTAGACAACCTTGGAGAACAGTATCAAATGGGAACGATGTATTGTTAAATCACAAAAGATTGGTATAATA

33,150

MATR3

MATR3-201

MATR3-201

AAATTCTGTGGTAGAATTAACCTTATTCAAGTATTCTCAGATTGTTGTTGGGCTGTACTTTCTCTAATTTGAAAGATGCTGGGAG
TTTAAGACACCATCTTAATTTGAATAAGTTCATAAGAGTCTAACAAACAACCCGACATGAAAGAGATTAACTTTCTACGACCTC

33,235

MATR3

MATR3-201

MATR3-201

TCTGAATACTAAAAGTGGCATGACCATTATTAATAAATTTTTAATATTGACATTATTATTGACACTTCAGTTATTTTTATG
AGACTTATGATTTTACCGTACTGGTAAGTATAATTTTATAAAAATTATAACTGTAATAATAACTGTGAAGTCAATAAAAATAC

33,320

MATR3

MATR3-201

MATR3-201

ACCAAAAAGTATATAAAGATCAAAAAGCATAAATACATAAAACCACAACATCACTAAAGAATAATTCCTATTGAGATATATTGAAATT
TGGTTTTTCATATATTTCTAGTTTTTCGTATTTATGTATTTGGTGTTGTAGTGATTTCTTATTAAGGATAAECTCTATATAACTTTAA

33,405

MATR3

MATR3-201

MATR3-201

TGTTTTTGTAAATTATCAGCTTCTTTGGACTACCTATTGAAATAGTGACTGAAACTTAAAAGTAGTTGCTAAACAAGTCAATTATA
ACAAAAACATTAATAGTCGAAGAAACCTGATGGATAACTTTATCACTGACTTTGAATTTTCATCAACGATTTGTTTCAGTTAATAT

33,490

MATR3

MATR3-201

MATR3-201

GATACCTTGGTTTTTTCACACTGCTTTATAATAAGTTAACTATAGTTACTCAGTCATTAGATATGTTCTCTGTTGACTAAATGGAT
CTATGGAACCAAAAAGTGTGACGAAATATTATTCAATTGATATCAATGAGTCAGTAATCTATACAAGAGACAACCTGATTTACCTA

33,575

MATR3

MATR3-201

MATR3-201

GAATGTAATCTTTAATTTTTGGAAATAATTCAAGTTCTTGGCTGTGTGTCACCTTCTGTTTTTTTTTTTTTTTTTAAATGTAAGTGC
CTTACATTAGAAATTAACCTTTTATTAAGTTCAAGAACCGACACACAGTGAAGACAAAAAAAAAAAAAAAAAATTTACATTGACG

33,660

MATR3

MATR3-201

MATR3-201

TCTTTGCCACCTATATGTCTTTTACCATCCTGTATATGAAGAAAGAATTGTGGCTATTTGCAATGGTAGCAGCAATGTAGTACAA
AGAAACGGTGGATATACAGAAAATGGTAGGACATATACTTCTTTCTTAACACCGATAAACGTTACCATCGTTCGTTACATCATGTT

33,745

MATR3

MATR3-201

MATR3-201

ATTATTTTATTTTATTTTTTTGAGACAGTTTTGCTCTTGTGGCCCAAGGCTGAAGTGCAATGGCGCGATTTTGGCTCACCCCAAC
TAATAAAAATAAAAATAAAAAAACTCTGTCAAAAACGAGAACAACGGGTTCCGACTTCACGTTACCGCGCTAAAACCGAGTGGGGTTG

33,830

MATR3

MATR3-201

MATR3-201

CCCCGCCTCCCAGGTTCAAGCCATTCTCTTGCCTCAGCCTCCTGAGTATCTGGGATTACAGGCATGCGCCACCATGCCCAGCTAA
GGGGCGGAGGGTCCAAGTTCGGTAAGAGAACGGAGTCGGAGGACTCATAGACCCTAATGTCCGTACGCGGTGGTACGGGTTCGATT

33,915

MATR3

MATR3-201

MATR3-201

TTTTGTATTTT TAGTGGAAATGGGGTTTCTCCATGTTGGTCAGACTGGTCTTGAACCTCCAGCTTCAGATGATCCTCCCACCTCA
AAAAACATAAAAAATCACCTTTACCCCAAAGAGGTACAACCAGTCTGACCAGAACTTGAGGGTCTGAAGTCTACTAGGAGGGTGGAGT

34,000

MATR3

MATR3-201

MATR3-201

GCCTCCCAAATGCTGGGATTACAGGCCTGAGCCATAGTGCCCGCCTGGTACAAATATTTTTATCTGCTTTGATTTTAAGCTGT
CGGAGGGTTTTACGACCCTAATGTCCGGACTCGGTATCACGGGCGGGACCATGTTTATAAAAAATAGACGAAACTAAAATTCGACA

34,085

MATR3

MATR3-201

MATR3-201

TTGGGGTCAAAAATATATGTATTGTCGAGAAGAATATGGAAATAATATAAAAGATTGCTAGGTGCTTCTTGTGGCTCCTTTTAT
AACCCAGTTTTTATATACATAACAGCTCTTCTTATACCTTTATTATATTTTCTAACGATCCACGAAGAACACCGAGGAAAATA

34,170

MATR3

MATR3-201

MATR3-201

TATTTCTTATATTTTATTTATTTTTTTTTTATTTGAGACAGAATTTTGCTCTTGTTCCCAAGCTGGAGTGCAATGGCACAATC
ATAAAGGAATATAAAATAAATAAAAAAAAAAATAAACTCTGTCTTAAACGAGAACAAGGGGTTTCGACCTCACGTTACCGTGTTAG

34,255

MATR3

MATR3-201

MATR3-201

TCAGTCACTGCAACCTCTGCGTCCCGGGTTCAAGCAATTCCTGCCTCAGGCTCCCGAGTAGCTGGTATTACAGGCGTGCGC
AGTCGAGTGACGTTGGAGACGCAGGGCCCAAGTTCGTTAAGAGGACGGAGTCCGAGGGCTCATCGACCATAATGTCCGCACACGG

34,340

MATR3

MATR3-201

MATR3-201

ACTTCGCCTGGCTAATTTTTGTATTTTTAGTAGAAACGGGGTTTACCATGTTAGCCAGGCTGGTCTTGAACCTTCTGACCTCAG
TGAAGCGGACCGATTAAAAAACATAAAAAATCATCTTTGCCCAAAGTGGTACAATCGGTCCGACCAGAACTTGAAGACTGGAGTC

34,425

MATR3

MATR3-201

MATR3-201

GTGATCGCCTGCCTCAGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCATCATGCCCGGCCTATTATTTCTTTTATTA
CACTAGCGGACGGAGTCGGAGGGTTTACGACCCTAATGTCCGCACTCGGTAGTACGGGCCGGATAATAAAGGAAAATAATTTTT

34,510

MATR3

MATR3-201

MATR3-201

AAAAAAAAAACTTTGTCACCTTCATCAAGAACTGTTAAGCATTACAGTAACTTGCTAATGGTAAATTGATACTTTCCTAACTG
TTTTTTTTTTTGAACAGTGGAAGTAGTTCCTTTGACAATTCGTAATGTCATTGAACGATTACCATTTAACATATGAAAGGATTGAC

34,595

MATR3

MATR3-201

MATR3-201

GATGTTTGTGGGGTGATTTTTTGTGTTGTTGTTTTCTTTAAAAGATATAATGGCTTTTAATTCTTACTATTTTGCATTAACTA
CTACAAACACCCCCTAAAAACAACAACAACAAAAAGAAATTTCTATATTACCGAAAATTAAGAATGATAAAACGTAATTGAT

34,680

MATR3

MATR3-201

MATR3-201

TATAAAGTTGAAATTC CAATGAGATGGAAAGAAGCTTTGGACATTTTAGGTTAGATTTTTAATATGTCTTTTGTACTTTTCATTA
ATATTTCAACTTTAAGGTTACTCTACCTTTCTTCGAAACCTGTAAAATCCAATCTAAAAAATTATACAGAAAACATGAAAGTAAT

34,765

MATR3

MATR3-201

MATR3-201

GTGTCTTAATGGAGCTCCCGTGTCTAGAACTCTAGCAGTCACAGGTTTAATGGCAGGGGTCAGCAAGCTACACTCGTGGCTCAG
CACAGAATTACCTCGAGGGCACAGATCTTTGAGATCGTCAGTGTC AAAATTACCGTCCCCAGTCGTTTCGATGTGAGCACCGAGTC

34,850

MATR3

MATR3-201

MATR3-201

TCATCTGTTTTGTAAGGTTTTATTAGAACCCACAGCCATAATCATTTAAGTGTCATCTATAGTTGTTTTAGTTTATAAATTGAGT
AGTAGACAAAAACATTCCAAAATAATCTTTGGGTGTCGGTATTAGTAAATTCACAGTAGATATCAACAAAATCAAATATTA ACTCA

34,935

MATR3

MATR3-201

MATR3-201

GCAGGATTGAGTAGTTGTAACAAAGACTGAATGGCCCAATGAGTCTAAAATATTTACTGCTGGCCTTGCAAGAAAATGTTTGTTC
CGTCCTAACTCATCAACATTGTTTCTGACTTACCGGGTACTCAGATTTTATAAATGACGACCGGAACGTTCTTTTACAAAACAAG

35,020

MATR3

MATR3-201

MATR3-201

AGGTGATTTAATGAGTAGTGCATTGAGGCCAGATGTGATAGCTCTTGCCTGTAATCCCAGCACTTTGGGAGGCGGGGACAGGCAG
TCCACTAAATTACTCATCACGTAACCTCCGGTCTACACTATCGAGAACGGACATTAGGGTCGTGAAACCCTCCGCCCTGTCCGTC

35,105

MATR3

MATR3-201

MATR3-201

ATCACCTGAGATCAGGAGTTTGGAGACCAGCCTGGCCAACACGGTGAAAAACCCCGTCTCTACCAAAAGTACAAAAAATTAACTGG
TAGTGGACTCTAGTCCTCAAACCTCTGGTCGGACCGTTGTGCCACTTTTGGGGCAGAGATGGTTTTTCATGTTTTTTAATTGACC

35,190

MATR3

MATR3-201

MATR3-201

GCTTGGTGGCGGGTGCCTGTAATCCCAGCTGCTTGGGAGGCTGAGGCAGGAGAATCACTTGAACCTGGGAGGTGGAGGTTGCAGT
CGAACCACCGCCACGGACATTAGGGTCGACGAACCTCCGACTCCGTCTCTTAGTGAACCTGGACCCTCCACCTCCAACGTCA

35,275

MATR3

MATR3-201

MATR3-201

TAGCCGAGATCACGACACTGCACTCCAGCCTGGGCAACAGAGCAAAACTCTCCCTCAAAAAAAAAAAGAATAAAAGTGCATGTCAT
ATCGGCTCTAGTGCTGTGACGTGAGGTCGGACCCGTTGTCTCGTTTTGAGAGGGAGTTTTTTTTTTCTTATTTTACGTACAGTA

35,360

MATR3

MATR3-201

MATR3-201

TTAAACCCATAGTTCTTGAATAGTGTCAGTTCAGTGTGACTGTGGTCTTTGTTTTCTCATCTCTAAAAATTAGGGTTAATTATAA
AATTTGGGTATCAAGAACTTATCACAGTCAAGTCACACTGACACCAGAAACAAAAGAGTAGAGATTTTAAATCCCAATTAATATT

35,445

MATR3

MATR3-201

MATR3-201

CATTTGAAATACCCATTTTATACCTTTTACCATTTTTTCCCGTGCCTTATTGTAATGTCCTGAAAGTTTTTGTGTGCTAATGAG
GTAAACTTTATGGGTAAAAATATGGAAAAATGGTAAAAAAGGGGCACGGAATAACATTACAGGACTTTCAAAAAACACACGATTACTC

35,530

MATR3

MATR3-201

MATR3-201

GATTAAC TAATTGTTGAAAATATTGACAAAATTATAGTTTAAGTCCCTAAACTTGGATATAGGATATTTGATTTTGGAAATTAATC
CTAATTGATTAACAACCTTTTATAACTGTTTTAATATCAAATTCAGGGATTTGAACCTATATCCTATAAACTAAAACCTTAATTAG

35,615

MATR3

MATR3-201

MATR3-201

CATTTTGCTGCATTTCTCTTAGGTGACTTAATGGCTGTAATTCCTTTCTTTATAGAAATTTCTGAATAAATTGGCAGAAGAACG
GTAAAACGACGTAAAGAGAATCCACTGAATTACCGACATTAAGAGAAAGAAATATCTTTAAAGACTTATTTAACCGTCTTCTTGC

35,700

MATR3

MATR3-201

MATR3-201

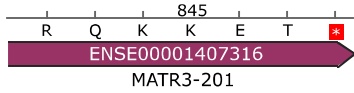
835 840
K F L N K L A E E R
ENSE0001407316

CAGACAGAAGAAGGAAACTTAAGATGTGCAAGGAGATTTAATGATTTCAAAGAAAATAATGGTTCTTTGTTTTAATGTTAACCT
GTCTGTCTTCTTCTTTGAATTCTACACGTTCTCTAAATTAATAAGTTTCTTTTATTACCAAGAAACAAAAATTACAATTGGA

35,785

MATR3

MATR3-201



TTTTTAAATACAATACTGATAGTTAGAAGAAAACCTATTGTA CTCTTTTGT TTTAGTGGAGAAAATAATAGATGTCTGTTTCATGTGT
AAAAATTTATGTTATGACTATCAATCTTCTTTTGATAACATGAGAAAACAAAATCACCTCTTTATTATCTACAGACAAGTACACA

35,870

MATR3

MATR3-201

TAAGTGTTATAGCAAAAAAATACACATATGGTTAAGTTAATGAATAGTTTTTGT TTTTATCAGAATGGCAACAGACAGAAGTACT
ATTCACAATATCGTTTTTTTTTATGTGTATACCAATTCAATTA CTTATCAAAAACAAAATAGTCTTACCGTTGTCTGTCTTTCATGA

35,955

MATR3

MATR3-201

TTGTAGAGATTGACTTCCTAAGCTACTTAAGACAACCTTGCA CCACTAAGAAAAAATGTAGAACCATTTGGAAAAATGAAATTTA
AACATCTCTAACTGAAGGATTCGATGAATTCTGTTGAACGTGGTGATTCTTTTTTTTACATCTTGGTAAACCTTTTTACTTTAAAT

36,040

MATR3

MATR3-201

GTAGTTCCAAGTTTCAAAGAAATGTCAACATTTTATTCCATT CAATAAAGAACAACCAATAGTGTTTTTATTACTTTTCATCTG
CATCAAGGTTCAAAGTTTCTTTACAGTTGTAATAAAGGTAAGTTATTTCTGT TTTTGGTTATCACAAAAATAATGAAAGTAGAC

36,125

MATR3

MATR3-201

AAACATTCCATGTTTTAATCTGAGCCTTGCA GACTTTTCATTTGGAGTTTGAACCCGTTTTGGTTGCATTTTCATTTTTGGAGA ACT
TTTGTAAGGTACAAAATTAGACTCGGAACGTCTGAAAGTAAACCTCAA ACTTGGGCAAAACCAACGTAAAGTAAAAACCTCTTGA

36,210

MATR3

MATR3-201

TAATTAACGTGAGATTGGCAATTGAAATGCAGGTGCAGT TTTCTGTTAATGTCATGCTGTTGTTTAGGTAATAAGAAATATTAAG
ATTAATTGCACTCTAACC GTTAACTTTACGTCCACGTCAA AAGACAATTACAGTACGACAACAAATCCATTATTCTTTATAATTC

36,295

MATR3

MATR3-201

TAATTGGCTTTAGATTTTGTAAATTTTTTCCCTGAGTT CCTGCTAGATTTTCGTATTCTAGTAGCAATGTATTTTCAGTGAAATG
ATTAACCGAAATCTAAAACATTA AAAAAAGGGACTCAAGGACGATCTAAAGCATAAGATCATCAGTTACATAAAAAGTCACTTTAC

36,380

MATR3

MATR3-201

CAAAAATATTCCCGTTATCTTTGACCAGTATTAATTTTTG AGATCTTACTGCTTGTCACTTGAATCCCGTGATTGTCATACATCT
GTTTTTATAAGGGCAATAGAAA CTGGTCATAATTA AAAACTCTAGAATGACGAACAGTGAACCTTAGGGCACTAACAGTATGTAGA

36,465

MATR3

MATR3-201

CTGGTATAAGCAACATTTGATTTTTGAAGTGTGTAGACCATCTCTTCATATTTTCAAGATGTAATTTTACATTTCTGCATTTTTA
GACCATATTCGTTGTAAACTAAAACTTCACACATCTGGTAGAGAAGTATAAAAAGTTCTACATTAATAATGTAAAGACGTAAAAAT

36,550

MATR3

MATR3-201

AAACAGTTTGGCCATAATCCTAGATGCACGCTTCTAATTCATGTACCTGCACATGTGACCTTTGTGAACAGAAATTTGCATGTAT
TTTGTCAAACCGGTATTAGGATCTACGTGCGAAGATTAAGTACATGGACGTGTACACTGGAAACACTTGTCTTTAAACGTACATA

36,635

MATR3

MATR3-201

AATTTGTGTTTACTTGTAACTTTCTGGTTATATACTGCTTATATCTGTGGATTCAAGTACTGAAGTGAATACCAATAAAAAAGAA
TTAAACACAAATGAACATTGAAAGACCAATATATGACGAATATAGACACCTAAGTTCAATGACTTCACTTATGGTTATTTTTCTT

36,720

MATR3

MATR3-201

AACCCTAGGCCATGTTAATTGGTTATACATGTTTGGAAATGTTAACCAACGTATTTGTCAGTTGTGGTTTTTATTCGCTCTTAAAC
TTGGGATCCGGTACAATTAACCAATATGTACAAACCTTACAATTGGTTGCATAAACAGTCAACACCAAAAAATAAGCGAGAATTTG

36,805

MATR3

MATR3-201

TTTGTGCATGCTTTAACAATTTATTACTTTTTAAATCTAGAGTGAATTCTAAAGACTGCCGCTAAAGATCTGAGTTTTAAAAATGT
AAACACGTACGAAATTTGTTAAATAATGAAAAATTTAGATCTCACTTAAGATTTCTGACGGCGATTTCTAGACTCAAAAATTTTTACA

36,890

MATR3

MATR3-201

TGTTGCTGGTGGATTTCTTGTTCCTGTTACATAACTAAAAGTGAGGCCATTTGTGGTTTTTAAAAACCTTATGAATTAATAATGC
ACAACGACCACCTAAAGAACAAGGACAATGTATTGATTTTCACTCCGGTAAACACCAAAAAATTTTTGGAATACTTAATTTTTACG

36,975

MATR3

MATR3-201

TACAGGTGAACAAACAGAAGCTTATGTTTAGAGATATTGATGACTTAACAGTACAATTGGAAGTAATACGGATGAGCAAGAATTA
ATGTCCACTTGTGTTGCTTCGAATACAAATCTCTATACTACTGAATTGTCATGTTAACCTTCATTATGCCTACTCGTTCTTAAT

37,060

MATR3

MATR3-201

GTTCTGCAGCTTTTCAAAAATAATTACGTAGAGACTCTTGGTATATTGGATTATCTGTTGTAAACAATTTTTTTTTCTTCCCTGAC
CAAGACGTGCGAAAAGTTTTATTAATGCATCTCTGAGAACCATATAACCTAATAGACAACATTTGTTAAAAAAAAGAAGGGACTG

37,145

MATR3

MATR3-201

ACAGGGTCTCACTCTGTCACCCAGACTGGAGTGCAGTGGCACAGTTCTCTGCAACCTCAGCCTTTGGGCTCAAATGACCCTCCTA
TGTCCAGAGTGAGACAGTGGGTCTGACCTCACGTACCCTGTCAAGAGACGTTGGAGTCGGAAACCCGAGTTTACTGGGAGGAT

37,230

MATR3

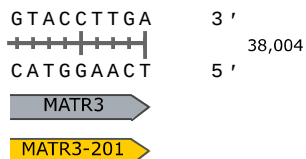
MATR3-201

CCTCAGTCTCCTGAGTAGCTGGGACTACAGGCTCATGCCACTATACCTGGCTAGTTTTTGGTTTTTTTTGTATAGATGGGGCTTTG
GGAGTCAGAGGACTCATCGACCCTGATGTCCGAGTACGGTGATATGGACCGATCAAAAACCAAAAAACATATCTACCCCGAAAC

37,315

MATR3

MATR3-201



Feature	Location	Size	Type
MATR3	1 .. 38,004	38,004 bp	gene
/note	= gene ENSG0000015479 Protein coding		
MATR3-220	1 .. 25,314	25,314 bp	prim_transcript
/note	= primary transcript ENST00000512876		
MATR3-222	7 .. 24,012	24,006 bp	prim_transcript
/note	= primary transcript ENST00000513678		
MATR3-221	43 .. 21,484	21,442 bp	prim_transcript
/note	= primary transcript ENST00000513121 Retained intron		
MATR3-208	45 .. 24,040	23,996 bp	prim_transcript
/note	= primary transcript ENST00000504045		
MATR3-209	46 .. 25,269	25,224 bp	prim_transcript
/note	= primary transcript ENST00000504311		
MATR3-203	49 .. 36,732	36,684 bp	prim_transcript
/note	= primary transcript ENST00000502499		
MATR3-215	57 .. 36,087	36,031 bp	prim_transcript
/note	= primary transcript ENST00000510056		
MATR3-216	64 .. 25,797	25,734 bp	prim_transcript
/note	= primary transcript ENST00000511249		
MATR3-201	67 .. 38,004	37,938 bp	prim_transcript
/note	= primary transcript ENST00000394805		
MATR3-212	69 .. 21,541	21,473 bp	prim_transcript
/note	= primary transcript ENST00000507860 Retained intron		
MATR3-214	70 .. 28,321	28,252 bp	prim_transcript
/note	= primary transcript ENST00000509918 protein_coding_CDS_not_defined		
MATR3-206	77 .. 36,329	36,253 bp	prim_transcript
/note	= primary transcript ENST00000503811		
MATR3-218	77 .. 28,356	28,280 bp	prim_transcript
/note	= primary transcript ENST00000511978 protein_coding_CDS_not_defined		
MATR3-227	105 .. 36,768	36,664 bp	prim_transcript
/note	= primary transcript ENST00000618441		
MATR3-213	279 .. 13,977	13,699 bp	prim_transcript
/note	= primary transcript ENST00000508689		
MATR3-225	292 .. 24,048	23,757 bp	prim_transcript
/note	= primary transcript ENST00000514528		
MATR3-206	308 .. 35,722	35,415 bp	CDS
▶ 14 segments = 1680 bp			
/note	= coding sequence ENSP00000423587		
/translation	= MLGAQWRRNQPSRAAE,,EWSQHINGASHSRRCQLLEI,,YPEWNPNDNTGHTM,,GDPFMLQQSTNPAPGILGPPPPSFHLGGPAVGPRGNL,, GAGNGNLQGPRHMQKGRV,,ETSRVVHIMDFQRGKNLRYQLLQLVEPFGVISNHLILNKINE,,AFIEMATTEDAQA AVDYTTTPALVFGKPV VHLSQKYKRIK,,KPEGKPDQKFDQKQELGRVIHLSNLPHSGYSDSAVLKLAEPYGIKIKNYILMRMKSQ,,AFIEMETREDAMAMVDHCLKKALWF QGRCVKVDLSEKYKLVLR,,IPNRGIDLKDKSR,,KRSYSPDGKESPSDKKSKTDGSQKTESSTEGKEQEEKSGEDGKEDTKDDQTEQEPNML LESEDELLVDEEEAALLESGSSVGDETDLANLGDVAVSDGKKEPSDKAVKKDGSASAAAKKKLKK,,VDKIEELDQENEALENGIKNEENTEPG AESSENAADPNKDTSENADGQSDENKDDYTIPDEYRIGPYQPNVPV,,GIDYVIPKTGFYCKLCSLFYTNEEVAKNTHCSSLPHYQKLG,,KFLNKL 559 amino acids = 62.6 kDa		
MATR3-225	308 .. 24,048	23,741 bp	CDS
▶ 6 segments = 516 bp			
/note	= coding sequence ENSP00000427557		
/translation	= MLGAQWRRNQPSRAAEVSGPGGKHAAGQGPRVRREILGEE,,EWSQHINGASHSRRCQLLEI,,YPEWNPNDNTGHTM,,GDPFMLQQSTNPA PGILGPPPPSFHLGGPAVGPRGNL,,GAGNGNLQGPRHMQKGRV,,ETSRVVHIMDFQRGKNLRYQLLQLVEPFGVISNHLILNKINE 172 amino acids = 18.9 kDa		

Feature	Location	Size	Type
MATR3-210	310 .. 29,275	28,966 bp	prim_transcript
/note	= primary transcript ENST00000504643 Retained intron		
MATR3-224	857 .. 14,042	13,186 bp	prim_transcript
/note	= primary transcript ENST00000514488		
MATR3-205	913 .. 14,004	13,092 bp	prim_transcript
/note	= primary transcript ENST00000503340		
MATR3-207	965 .. 13,975	13,011 bp	prim_transcript
/note	= primary transcript ENST00000504023		
RNA5SP195	6179 .. 6295	117 bp	gene
/note	= gene ENSG00000199545 rRNA_pseudogene		
RNA5SP195-201	6179 .. 6295	117 bp	prim_transcript
/note	= primary transcript ENST00000362675 rRNA_pseudogene		
MATR3-201	13,743 .. 35,722	21,980 bp	CDS
▶ 14 segments = 2544 bp			
/note	= coding sequence ENSP00000378284		
/translation	= MSKSFQ QSSLRDSQGHGRDLSAAGIGLLAAATQSLMPASLGRMNQGTARLASLMNLGMSSSLNQQGAHSALSSASTSSHNLQ SIFNIGSR GPLPLSSQHRGDADQASNILASFGLSARDLDELSRYPEDKITPENLPQILLQLKRRRTEEGPTLSYGRDGRSATREPPYRVPRDDWEEKRHFRRD SFDDRGP SLNPVLDYDHGSRSSQESGYDRMDYEDDLRLDGERCRDSSFGETSHNYHKFDSEYERMGRGPGPLQERSLFEKKRGAPPSSNIEDF HGLLPKGYPHLCSICDLPVHSNK,,EWSQHINGASHSRRCQLLEI,,YPEWNP DNDT GHTM,,GDPFMLQQSTNPAPGILGPPPPSFHLGGPAVGP RGNL,,GAGNGNLQGPRHMQKGRV,,ETSRVVHIMDFQRGKNLRYQLLQLEPFVGVISNHILINKINE,,AFIEMATTEDAQAADVYTTTPALVFG KPV RVHLSQKYKRIK,,KPEGKPDQKFDQKQELGRVIHLSNLP HSGYSDSAVLKLAEPY GKIKNYILMRMSQ,,AFIEMETREDAMAMVDHCLKK ALWFQGRCVKVDLSEKYKLVLR,,IPNRGIDLLKKDKSR,,KRSYSPDGKESPSDKKSKTDGSQKTESSTEGKEQEEKSGEDGEKDTKDDQTEQE PNMLLESEDELLVDEEEAAALLES GSSVGDETDLANLGDV ASDGKKEPSDKAVKKDGSASAAAKKLLK,,VDKIEELDQENEAALENGIKNEEN 759 GAHSALSSASTSSHNLQ SIFNIGSR 847 GAHSALSSASTSSHNLQ SIFNIGSR FLNKLAEEERRQKKET*		
MATR3-227	13,743 .. 35,722	21,980 bp	CDS
▶ 14 segments = 2544 bp			
/note	= coding sequence ENSP00000482895		
/translation	= MSKSFQ QSSLRDSQGHGRDLSAAGIGLLAAATQSLMPASLGRMNQGTARLASLMNLGMSSSLNQQGAHSALSSASTSSHNLQ SIFNIGSR GPLPLSSQHRGDADQASNILASFGLSARDLDELSRYPEDKITPENLPQILLQLKRRRTEEGPTLSYGRDGRSATREPPYRVPRDDWEEKRHFRRD SFDDRGP SLNPVLDYDHGSRSSQESGYDRMDYEDDLRLDGERCRDSSFGETSHNYHKFDSEYERMGRGPGPLQERSLFEKKRGAPPSSNIEDF HGLLPKGYPHLCSICDLPVHSNK,,EWSQHINGASHSRRCQLLEI,,YPEWNP DNDT GHTM,,GDPFMLQQSTNPAPGILGPPPPSFHLGGPAVGP RGNL,,GAGNGNLQGPRHMQKGRV,,ETSRVVHIMDFQRGKNLRYQLLQLEPFVGVISNHILINKINE,,AFIEMATTEDAQAADVYTTTPALVFG KPV RVHLSQKYKRIK,,KPEGKPDQKFDQKQELGRVIHLSNLP HSGYSDSAVLKLAEPY GKIKNYILMRMSQ,,AFIEMETREDAMAMVDHCLKK ALWFQGRCVKVDLSEKYKLVLR,,IPNRGIDLLKKDKSR,,KRSYSPDGKESPSDKKSKTDGSQKTESSTEGKEQEEKSGEDGEKDTKDDQTEQE PNMLLESEDELLVDEEEAAALLES GSSVGDETDLANLGDV ASDGKKEPSDKAVKKDGSASAAAKKLLK,,VDKIEELDQENEAALENGIKNEEN 759 GAHSALSSASTSSHNLQ SIFNIGSR 847 GAHSALSSASTSSHNLQ SIFNIGSR FLNKLAEEERRQKKET*		
MATR3-215	13,743 .. 35,685	21,943 bp	CDS
▶ 13 segments = 2385 bp			
/note	= coding sequence ENSP00000426743		
/translation	= MSKSFQ QSSLRDSQGHGRDLSAAGIGLLAAATQSLMPASLGRMNQGTARLASLMNLGMSSSLNQQGAHSALSSASTSSHNLQ SIFNIGSR GPLPLSSQHRGDADQASNILASFGLSARDLDELSRYPEDKITPENLPQILLQLKRRRTEEGPTLSYGRDGRSATREPPYRVPRDDWEEKRHFRRD SFDDRGP SLNPVLDYDHGSRSSQESGYDRMDYEDDLRLDGERCRDSSFGETSHNYHKFDSEYERMGRGPGPLQERSLFEKKRGAPPSSNIEDF HGLLPKGYPHLCSICDLPVHSNK,,EWSQHINGASHSRRCQLLEI,,YPEWNP DNDT GHTM,,GDPFMLQQSTNPAPGILGPPPPSFHLGGPAVGP RGNL,,GAGNGNLQGPRHMQKGRV,,ETSRVVHIMDFQRGKNLRYQLLQLEPFVGVISNHILINKINE,,AFIEMATTEDAQAADVYTTTPALVFG KPV RVHLSQKYKRIK,,KPEGKPDQKFDQKQELGRVIHLSNLP HSGYSDSAVLKLAEPY GKIKNYILMRMSQ,,AFIEMETREDAMAMVDHCLKK ALWFQGRCVKVDLSEKYKLVLR,,IPNRGIDLLKKDKSR,,KRSYSPDGKESPSDKKSKTDGSQKTESSTEGKEQEEKSGEDGEKDTKDDQTEQE PNMLLESEDELLVDEEEAAALLES GSSVGDETDLANLGDV ASDGKKEPSDKAVKKDGSASAAAKKLLK,,VDKIEELDQENEAALENGIKNEEN 759 GAHSALSSASTSSHNLQ SIFNIGSR 847 GAHSALSSASTSSHNLQ SIFNIGSR FLNKLAEEERRQKKET*		
MATR3-208	13,743 .. 24,040	10,298 bp	CDS
▶ 6 segments = 1300 bp			
/note	= coding sequence ENSP00000423290		
/translation	= MSKSFQ QSSLRDSQGHGRDLSAAGIGLLAAATQSLMPASLGRMNQGTARLASLMNLGMSSSLNQQGAHSALSSASTSSHNLQ SIFNIGSR GPLPLSSQHRGDADQASNILASFGLSARDLDELSRYPEDKITPENLPQILLQLKRRRTEEGPTLSYGRDGRSATREPPYRVPRDDWEEKRHFRRD SFDDRGP SLNPVLDYDHGSRSSQESGYDRMDYEDDLRLDGERCRDSSFGETSHNYHKFDSEYERMGRGPGPLQERSLFEKKRGAPPSSNIEDF HGLLPKGYPHLCSICDLPVHSNK,,EWSQHINGASHSRRCQLLEI,,YPEWNP DNDT GHTM,,GDPFMLQQSTNPAPGILGPPPPSFHLGGPAVGP RGNL,,GAGNGNLQGPRHMQKGRV,,ETSRVVHIMDFQRGKNLRYQLLQLEPFVGVISNHILINKINE,,AFIEMATTEDAQAADVYTTTPALVFG KPV RVHLSQKYKRIK,,KPEGKPDQKFDQKQELGRVIHLSNLP HSGYSDSAVLKLAEPY GKIKNYILMRMSQ,,AFIEMETREDAMAMVDHCLKK ALWFQGRCVKVDLSEKYKLVLR,,IPNRGIDLLKKDKSR,,KRSYSPDGKESPSDKKSKTDGSQKTESSTEGKEQEEKSGEDGEKDTKDDQTEQE PNMLLESEDELLVDEEEAAALLES GSSVGDETDLANLGDV ASDGKKEPSDKAVKKDGSASAAAKKLLK,,VDKIEELDQENEAALENGIKNEEN 759 GAHSALSSASTSSHNLQ SIFNIGSR 847 GAHSALSSASTSSHNLQ SIFNIGSR FLNKLAEEERRQKKET*		
MATR3-224	13,743 .. 14,042	300 bp	CDS
/note	= coding sequence ENSP00000426801		
/translation	= MSKSFQ QSSLRDSQGHGRDLSAAGIGLLAAATQSLMPASLGRMNQGTARLASLMNLGMSSSLNQQGAHSALSSASTSSHNLQ SIFNIGSR GPLPLSSQHRGDADQASNILASFGLSARDLDELSRYPEDKITPENLPQILLQLKRRRTEEGPTLSYGRDGRSATREPPYRVPRDDWEEKRHFRRD SFDDRGP SLNPVLDYDHGSRSSQESGYDRMDYEDDLRLDGERCRDSSFGETSHNYHKFDSEYERMGRGPGPLQERSLFEKKRGAPPSSNIEDF HGLLPKGYPHLCSICDLPVHSNK,,EWSQHINGASHSRRCQLLEI,,YPEWNP DNDT GHTM,,GDPFMLQQSTNPAPGILGPPPPSFHLGGPAVGP RGNL,,GAGNGNLQGPRHMQKGRV,,ETSRVVHIMDFQRGKNLRYQLLQLEPFVGVISNHILINKINE,,AFIEMATTEDAQAADVYTTTPALVFG KPV RVHLSQKYKRIK,,KPEGKPDQKFDQKQELGRVIHLSNLP HSGYSDSAVLKLAEPY GKIKNYILMRMSQ,,AFIEMETREDAMAMVDHCLKK ALWFQGRCVKVDLSEKYKLVLR,,IPNRGIDLLKKDKSR,,KRSYSPDGKESPSDKKSKTDGSQKTESSTEGKEQEEKSGEDGEKDTKDDQTEQE PNMLLESEDELLVDEEEAAALLES GSSVGDETDLANLGDV ASDGKKEPSDKAVKKDGSASAAAKKLLK,,VDKIEELDQENEAALENGIKNEEN 759 GAHSALSSASTSSHNLQ SIFNIGSR 847 GAHSALSSASTSSHNLQ SIFNIGSR FLNKLAEEERRQKKET*		
600 amino acids = 10.2 kDa			

Feature	Location	Size	Type
MATR3-205	13,743 .. 14,004	262 bp	CDS
/note	= coding sequence ENSP00000422590		
/translation	= MSKSFQQSSLSRDSQGHGRDLSAAGIGLLAAATQSLMPASLGRMNQGTARLASLMNLGMSSSLNQQGAHSALSSASTSSHNLQSIF 87 amino acids = 8.9 kDa		
MATR3-213	13,743 .. 13,977	235 bp	CDS
/note	= coding sequence ENSP00000422137		
/translation	= MSKSFQQSSLSRDSQGHGRDLSAAGIGLLAAATQSLMPASLGRMNQGTARLASLMNLGMSSSLNQQGAHSALSSAST 78 amino acids = 7.9 kDa		
MATR3-207	13,743 .. 13,975	233 bp	CDS
/note	= coding sequence ENSP00000421145		
/translation	= MSKSFQQSSLSRDSQGHGRDLSAAGIGLLAAATQSLMPASLGRMNQGTARLASLMNLGMSSSLNQQGAHSALSSAS 77 amino acids = 7.8 kDa		
Donor Template SNV -> REV	13,971 .. 14,070	100 bp	misc_feature
Protospacer Sequence	13,989 .. 14,008	20 bp	misc_feature
SNV	13,996 .. 13,996	1 bp	misc_feature
/note	= REV = C SNV = G		
PAM	14,009 .. 14,011	3 bp	misc_feature
MATR3-226	14,422 .. 28,344	13,923 bp	CDS
8 segments = 1001 bp			
/note	= coding sequence ENSP00000422054		
/translation	= EKGVGMILFLVPRPITIINLTVSMREWDVVLA PYKRDLSLRKREALLQVAILKTSMDSYRRVIPICALYVICQFILIR,,SGVNISMEQVTVVDASFF LK,,WVIHSCSSSLQIQHQEFWDLHLPFILGDQQLDQEEIW,,VLEMETCKDLDTCKRKAEW,,KLAELFTSWIFNEGKT*DTSYYSW*NHLESFQII *F*IKLMR,,HLLKWQPQRMLRPQWIITQPHQR*YLA SQ*EFYPRSIKE*R,,NLKESQIRSLIKSKSLDV*YISAICRILAILIVLFSSLLSLMGK*RI TY**G*KVR,,LLLRWRQEKMQWQWLTIV*KKPFGRGDV*RLTCLRNIK 333 codons (14 internal stop codons)		
MATR3-226	14,422 .. 28,344	13,923 bp	prim_transcript
/note	= primary transcript ENST00000515833		
MATR3-223	14,570 .. 21,472	6903 bp	prim_transcript
/note	= primary transcript ENST00000514402 Retained intron		
MATR3-211	16,370 .. 36,764	20,395 bp	prim_transcript
/note	= primary transcript ENST00000505625 Retained intron		
MATR3-230	17,564 .. 14,041	34,482 bp	prim_transcript
/note	= primary transcript ENST00000502394 Protein coding		
MATR3-233	19,542 .. 13,883	32,346 bp	prim_transcript
/note	= primary transcript ENST00000505016 Protein coding		
MATR3-235	19,549 .. 23,997	4449 bp	prim_transcript
/note	= primary transcript ENST00000509644 Protein coding		
MATR3-238	19,569 .. 14,064	32,500 bp	prim_transcript
/note	= primary transcript ENST00000514694 Protein coding		
MATR3-229	19,569 .. 37,998	18,430 bp	prim_transcript
/note	= primary transcript ENST00000394800 Protein coding		
MATR3-231	19,569 .. 36,755	17,187 bp	prim_transcript
/note	= primary transcript ENST00000502929 Protein coding		
MATR3-232	19,569 .. 36,084	16,516 bp	prim_transcript
/note	= primary transcript ENST00000504203 Protein coding		
MATR3-228	19,570 .. 36,721	17,152 bp	prim_transcript
/note	= primary transcript ENST00000361059 Protein coding		

Feature	Location	Size	Type
MATR3-237	19,835 .. 22,420	2586 bp	prim_transcript
/note	= primary transcript ENST00000512107 Protein coding		
MATR3-234	19,884 .. 22,475	2592 bp	prim_transcript
/note	= primary transcript ENST00000506147 Protein coding		
MATR3	19,921 .. 37,998	18,078 bp	gene
/note	= gene ENSG00000280987 Protein coding		
MATR3-236	19,921 .. 35,731	15,811 bp	prim_transcript
/note	= primary transcript ENST00000509990 Protein coding		
MATR3-222	21,062 .. 24,012	2951 bp	CDS
▶ 4 segments	= 258 bp		
/note	= coding sequence ENSP00000424646		
/translation	= M,,GDPFMLQ Q STNPAPGILGPPPPSFHLGGPAVGPRGNL,,GAGNGNLQGPRHMQKGRV,,ETSRVVHIMDFQ R GKLNRYQLLQLVEPFGV 86 amino acids = 9.2 kDa		
MATR3-217	21,674 .. 23,432	1759 bp	prim_transcript
/note	= primary transcript ENST00000511333 Retained intron		
MATR3-203	22,064 .. 35,722	13,659 bp	CDS
▶ 12 segments	= 1530 bp		
/note	= coding sequence ENSP00000426030		
/translation	= M,,GDPFMLQ Q STNPAPGILGPPPPSFHLGGPAVGPRGNL,,GAGNGNLQGPRHMQKGRV,,ETSRVVHIMDFQ R GKLNRYQLLQLVEPFGVISNH LILNKINE,,AFIEMATTEDAQA A VDYYTTTTPALVFGKPV R VHLSQKYKRIK,,KPEGKPDQ K FDQKQELGRVIHLSNLP H SGYSDSAVLKLAEPY G KIKNYILMRMSQ,,AFIEMETREDAMAMVDHCLKKALWFQGR C VKVDLSEKYKLVLR,,IPNRGIDLLKKDKSR,,KRSYSPDGKES P SDKKS K TD GSQKTESSTEGKEQE E KSGEDGEKDTKDDQTEQEPNMLLESEDELLVDEEEAAALLES G SSVGD E TDLANLGDVA S DGKKEP S DKAVK K DGS ASAAAKKKLKK,,VDKIEELDQENEAALENGIKNEENTEPGA E SSENADDPNKD T SENADGQSDENKDDY T IPDEYRIGPYQPNVPV,,GIDYVIP 509 amino acids = 15.7 kDa		
MATR3-220	22,064 .. 25,314	3251 bp	CDS
▶ 5 segments	= 374 bp		
/note	= coding sequence ENSP00000425150		
/translation	= M,,GDPFMLQ Q STNPAPGILGPPPPSFHLGGPAVGPRGNL,,GAGNGNLQGPRHMQKGRV,,ETSRVVHIMDFQ R GKLNRYQLLQLVEPFGVISNH LILNKINE,,AFIEMATTEDAQA A VDYYTTTTPALVF 124 amino acids = 13.5 kDa		
MATR3-209	22,064 .. 25,269	3206 bp	CDS
▶ 5 segments	= 329 bp		
/note	= coding sequence ENSP00000422700		
/translation	= M,,GDPFMLQ Q STNPAPGILGPPPPSFHLGGPAVGPRGNL,,GAGNGNLQGPRHMQKGRV,,ETSRVVHIMDFQ R GKLNRYQLLQLVEPFGVISNH LILNKINE,,AFIEMATTEDA 109 amino acids = 11.8 kDa		
MATR3-202	22,078 .. 35,975	13,898 bp	prim_transcript
/note	= primary transcript ENST00000502422 Retained intron		
MATR3-216	23,947 .. 25,797	1851 bp	CDS
▶ 3 segments	= 365 bp		
/note	= coding sequence ENSP00000422649		
/translation	= MDFQRGKLNRYQLLQLVEPFGVISNH L I L NKINE,,AFIEMATTEDAQA A VDYYTTTTPALVFGKPV R VHLSQKYKRIK,,KPEGKPDQ K FDQKQEL GRVIHLSNLP H SGYSDSAVLKLAEPY G KI 121 amino acids = 13.8 kDa		
MATR3-204	28,132 .. 29,017	886 bp	prim_transcript
/note	= primary transcript ENST00000502944 Retained intron		
MATR3-219	29,073 .. 32,582	3510 bp	prim_transcript
/note	= primary transcript ENST00000512040 protein_coding_CDS_not_defined		

Primer	Length	Binding Sites	Tm	Date Added
✓ PCR Forward	25-mer	13,565 .. 13,589	61°C	Jan 11, 2023
/sequence = GAGTTGTCTGCTGGTTCTCAGCTTG 52% GC / 7686.0 Da				
✓ Sanger Sequencing	20-mer	13,884 .. 13,903	60°C	Jan 11, 2023
/sequence = GG TACTGCACGCCTTGCTAG 60% GC / 6109.0 Da				
✓ Donor Template REV -> SNV	100-mer	13,971 .. 14,070	74°C	Jan 11, 2023
/sequence = TACTGGCCTGGTCTGCATCTCCACGGTGTGAGAAGATAAAGGGAGTGGACCTCTACTTCCAATGTAAATATAGACTGCAAATTATGGG 43% GC / 983.2 Da				
✓ gRNA Protospacer	20-mer	13,989 .. 14,008	41°C	Jan 11, 2023
/sequence = TTGCAGTGTATATTTAACAT 25% GC / 6121.1 Da				
✓ PCR Reverse	25-mer	14,493 .. 14,517	66°C	Jan 11, 2023
/sequence = GGCCAGGACCA CGTCCCATTCTCTC 64% GC / 7538.9 Da				