

JIPSC1042_SnapgeneDNA_INK2J00085R_HNRNPA1_D262N_REVWT






 HNRNPA1




 $\square$ HNRNPA1

HNRNPA1-202
HNRNPA1-202




HNRNPA1
HNRNPA1-202


HNRNPA1-202



$\qquad$ HNRNPA1-202












HNRNPA1-202


## HNRNPA1-202











PCR Forward CTTTGGGACCTTAGGCGCTTAGTTG


 HNRNPA1-202







## $\frac{\text { 9RNA Protospacer }}{\text { TACAATA }}$ ATTT T










## 





GGGATTACATCGACTCGTCACGTTG
PCR Reverse


 HNRNPA1

## HNNNA1-202



 $\square$ HNRNPA1 $>$




HNRNPA1 HNRNPA1-202



HNRNPA1


 HNRNPAI $>$







HNRNPA1
HNRNPA1-202


 $\square$ HNRNPA1 $\ggg$




HNRNPA1
HNNNPA-202



HNRNPA1







HNRNPA1























| HNRNPA1 |  |  | .. 6896 | 6896 bp | $\square$ | $\rightarrow$ | gene |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| /note | $\begin{aligned} & =\begin{array}{l} \text { gene ENSG00000135486 } \\ \text { Protein coding } \end{array} \end{aligned}$ |  |  |  |  |  |  |
| HNRNPA1-203 |  |  | .. 6895 | 6895 bp | $\square$ | $\rightarrow$ | prim_transcript |
| /note | $=$ primary transcript ENST00000546500 |  |  |  |  |  |  |
| HNRNPA1-238 |  | 471 | .. 5651 | 5181 bp | $\square$ | $\rightarrow$ | prim_transcript |
| /note | = primary transcript ENST00000677385 |  |  |  |  |  |  |
| HNRNPA1-231 |  | 471 | .. 5650 | 5180 bp | $\square$ | $\rightarrow$ | prim_transcript |
| /note | $=$ primary transcript ENST00000677210 |  |  |  |  |  |  |
| HNRNPA1-237 |  | 471 | .. 5037 | 4567 bp | $\square$ | $\rightarrow$ | prim_transcript |
| /note | $=$ primary transcript ENST00000677375 |  |  |  |  |  |  |
| HNRNPA1-234 |  | 499 | .. 5553 | 5055 bp | $\square$ | $\rightarrow$ | prim_transcript |
| /note | $=$ primary transcript ENST00000677249 |  |  |  |  |  |  |
| HNRNPA1-220 |  | 506 | .. 5046 | 4541 bp | $\square$ | $\rightarrow$ | prim_transcript |
| /note | $\begin{aligned} & =\begin{array}{l} \text { primary transcript ENST00000676725 } \\ \text { Retained intron } \end{array} \end{aligned}$ |  |  |  |  |  |  |
| HNRNPA1-259 |  | 506 | .. 5045 | 4540 bp | $\square$ | $\rightarrow$ | prim_transcript |
| /note | $\begin{aligned} &= \text { primary transcript ENST00000678418 } \\ & \text { Retained intron } \end{aligned}$ |  |  |  |  |  |  |
| HNRNPA1-209 |  | 512 | .. 5650 | 5139 bp | $\square$ | $\rightarrow$ | prim_transcript |
| /note | $=$ primary transcript ENSTO0000550482 |  |  |  |  |  |  |
| HNRNPA1-202 |  | 534 | .. 6895 | 6362 bp | ■ | $\rightarrow$ | prim_transcript |
| /note | $=$ primary transcript ENST00000340913 |  |  |  |  |  |  |
| HNRNPA1-279 |  | 534 | .. 1749 | 1216 bp | $\square$ | $\rightarrow$ | prim_transcript |
| /note | $=$ primary transcript ENST00000679101 |  |  |  |  |  |  |
| HNRNPA1-205 |  | 556 | .. 6896 | 6341 bp | $\square$ | $\rightarrow$ | prim_transcript |
| /note | $\begin{aligned} = & \text { primary transcript ENST000000547566 } \\ & \text { Nonsense mediated decay } \end{aligned}$ |  |  |  |  |  |  |
| HNRNPA1-206 |  | 556 | .. 3686 | 3131 bp | ㅁ | $\rightarrow$ | prim_transcript |
| /note | $=$ primary transcript ENST00000547708 |  |  |  |  |  |  |
| HNRNPA1-280 |  | 557 | .. 5553 | 4997 bp | $\square$ | $\rightarrow$ | prim_transcript |
| /note | $\begin{aligned} &= \text { primary transcript ENST00000679228 } \\ & \text { Retained intron } \end{aligned}$ |  |  |  |  |  |  |
| HNRNPA1-207 |  | 564 | .. 2414 | 1851 bp | ㅁ | $\rightarrow$ | prim_transcript |
| /note | $\begin{aligned} &= \text { primary transcript ENSTO0000547870 } \\ & \text { Retained intron } \end{aligned}$ |  |  |  |  |  |  |
| HNRNPA1-213 |  | 571 | .. 2294 | 1724 bp | $\square$ | $\rightarrow$ | prim_transcript |
| /note | $=$ primary transcript ENST00000551702 |  |  |  |  |  |  |
| HNRNPA1-257 |  | 583 | .. 6540 | 5958 bp | $\square$ | $\rightarrow$ | prim_transcript |
| /note | $=$ primary transcript ENST00000678365 |  |  |  |  |  |  |
| HNRNPA1-201 |  | 583 | .. 4689 | 4107 bp | $\square$ | $\rightarrow$ | prim_transcript |
| /note | = primary transcript ENST00000330752 |  |  |  |  |  |  |
| HNRNPA1-221 |  | 583 | .. 4125 | 3543 bp | $\square$ | $\rightarrow$ | prim_transcript |
| /note | $=$ primary transcript ENST00000676794 |  |  |  |  |  |  |
| HNRNPA1-204 |  | 588 | .. 5059 | 4472 bp | $\square$ | $\rightarrow$ | prim_transcript |
| /note | $=$ primary transcript ENST00000547276 |  |  |  |  |  |  |
| HNRNPA1-272 |  | 588 | .. 2108 | 1521 bp | ㅁ | $\rightarrow$ | prim_transcript |
| /note | $=$ primary transcript ENST00000678919 |  |  |  |  |  |  |
| HNRNPA1-268 |  | 588 | .. 1749 | 1162 bp | $\square$ | $\rightarrow$ | prim_transcript |
| /note | $=$ primary transcript ENST00000678690 |  |  |  |  |  |  |
| HNRNPA1-232 |  | 616 | .. 6895 | 6280 bp | $\square$ | $\rightarrow$ | prim_transcript |
| /note | $\begin{aligned} = & \text { primary transcript ENST00000677220 } \\ & \text { Nonsense mediated decay } \end{aligned}$ |  |  |  |  |  |  |
| HNRNPA1-201 |  | 616 | .. 4121 | 3506 bp | $\square$ | $\rightarrow$ | CDS |

NPA1-201
Inote $=$ coding sequence ENSP00000333504
 SGKKRGFAFVTFDDHDSVDKIV,,IQKYHTVNGHNCEVRKALSKQEMASASSSQR,,GRSGSGNFGGGRGGGFGGNDNFGRGGNFSGRGI,,GDGYNGFGND,,GSNFGGGGSYNDFGNYNNQSSNFGPMKGGNFGGRSSGPYG S6

## HNRNPA1-202

616 .. $4121 \quad 3506 \mathrm{bp} \quad \square \quad \rightarrow \quad$ CDS
( 10 segments $=1119 \mathrm{bp}$
Inote $\quad=$ coding sequence ENSP000000341826
 SGKKRGFAFVTFDDHDSVDKIV,IQKYHTVNGHNCEVRKALSKOEMASASSSQR, GRSGSGNFGGGRGGGFGGNDNFGRGGNFSGR GGFGGSRGGGGYGGSGDGYNGFGND QGSGYGGSGSYDSYNNGGGGGFGGGS,,GSNFGGGGSYNDFGNYNNQSSNFGPMKGGNFGGRSSGPYGGGGQYFAKPRNQ,, GGYGGSSSSSSYGSGRRF*
372 amino acids $=38.7 \mathrm{kDa}$
HNRNPA1-203

- 9 segments $=963 \mathrm{bp}$
note $=$ coding sequence ENSP00000448617
 SGKKRGFAFVTFDDHDSVDKIV,,IQKYHTVNGHNCEVRKALSKQEMASASSSQR,,GRSGSGNFGGGRGGGFGGNDNFGRGGNFSGR,,GGFGGSRGGGGYGGSGDGYNGFGND, GSNFGGGGSYNDFGNYNNQSSNFGPM K6Gemblo

HNRNPA1-204
616 .. $4121 \quad 3506 \mathrm{bp} \quad \square \quad \rightarrow \quad$ CDS


4 segments $=436 \mathrm{bp}$
note $\quad=$ coding sequence ENSP000000448117

HNRNPA1-272 $\quad 616$.. $2108 \quad 1493 \mathrm{bp} \quad \square \quad \rightarrow \quad$ CDS

- 2 segments $=226 \mathrm{bp}$
/note $\quad=$ coding sequence ENSP00000504604
/translation $=$ MSKSE,,DSQRPGAHLTVKKIFVGGIKEDTEEHHLRDYFEQYGKIEVIEIMTDRGSGKKRGFAFVTFDDHDSVDKIV
HNRNPA1-268 $\quad 616$.. $1749 \quad 1134 \mathrm{bp} \quad \rightarrow \quad \rightarrow \quad$ CDS
- 2 segments $=162 \mathrm{bp}$
/note $\quad=$ coding sequence ENSP00000503229
/translation $=$ MSKSE,,VMRDPNTKRSRGFGFVTYATVEEVDAAMNARPHKVDGRVVEPKRAVSRE


## HNRNPA1-250

/note
HNRNPA1-208
/note $\quad=\quad$ primary transcript ENST000000548688
HNRNPA1-208 831 .. $2434 \quad 1604 \mathrm{bp} \quad \square \quad \rightarrow \quad$ CDS

- 6 segments $=694 \mathrm{bp}$
/note

/translation $=\begin{aligned} & \text { MRDSLLVAKFLGTQDLCLFLNLAL,,SPKEPEQLRKLFIGGLSFETTDESLRSHFEQWGTLTDCV,,VMRDPNTKRSRGFGFVTYATVEEVVAAMNA }\end{aligned}$
231 amino acids $=25.7 \mathrm{kDa}$
HNRNPA1-261 $\quad 1603$.. $4125 \quad 2523 \mathrm{bp} \quad \square \quad \rightarrow \quad$ prim_transcript
/note
= primary transcript ENST00000678448 Nonsense mediated decay
HNRNPA1-282
/note
$=$ primary transcript ENST00000679273 Nonsense mediated decay

| 1603 | . .4125 | 2523 bp | $\square$ | $\rightarrow$ |
| :--- | :--- | :--- | :--- | :--- |
| prim_transcript |  |  |  |  |

/note
= primary transcript ENST000000550994 Nonsense mediated decay
$=$ primary transcript ENST00000676842 Nonsense mediated decay
$\begin{array}{llcccc}\text { Feature } & \text { Location } & \text { Size } & \text { 化 } & \text { Type } \\ \text { HNRNPA1-250 } & 1606 & . .4121 & 2516 \mathrm{bp} & \square & \rightarrow\end{array}$

- 7 segments $=828 \mathrm{bp}$


1 2 segments $=249 \mathrm{bp}$
/note $=$ coding sequence ENSP 0000050475
/translation $=$ FRNTIL*MATTVKLEKPCQSKRWLVLHPAKE,,VVMEEAALVTLEEAEAMEVVDRVMETRAVAMAGVAAMTAITTEAEAALAVVV 83 codons (1 internal stop codon)

| HNRNPA1-243 |  | 2202 | .. 3042 | 841 bp | $\square$ | $\rightarrow$ | prim_transcript |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| /note | $=$ primary transcript ENST00000677645 |  |  |  |  |  |  |
| HNRNPA1-236 |  | 2202 | .. 2682 | 481 bp | $\square$ | $\rightarrow$ | CDS |

- 2 segments $=168$



|  | 2 segments $=231 \mathrm{bp}$ |  |
| ---: | :--- | ---: | :--- |
| /note | $=$ | coding sequence ENSP 00000503516 |
| /translation | $=$ | VEVVLETLVVVVEVVSVGMTTSVVEETSVV,,VVEATMILGITTISLQILDP*REEILEAEALAPMAVEANTLQNHETK |
|  | 77 codons (1 internal stop codon) |  |

HNRNPA1-270 $\quad 2381$.. $3775 \quad 1395 \mathrm{bp} \quad \square \rightarrow \mathrm{CDS}$

| /note | $=$ coding sequence ENSP00000503756 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| /translation | VEVVLETLVVVVEVVSVGMTTSVVEETSVVV,,EAILEVVEATMILGITTISLQILDP*REEILEAEALAPMAVEANTLQNHETK <br> 83 codons (1 internal stop codon) |  |  |  |  |
| HNRNPA1-273 | 2381 .. 3775 | 1395 bp | $\square$ | $\rightarrow$ | CDS |



| /note | $=$ coding sequence ENSP00000504511 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| /translation | $=$ VEVVLETLVVVVEVVSVGMTTSVVEETSVVV,,VVMEEAALVTLEEAEAMEVVDRVMETRAVAMAGVAAMTAITTEAEAALAVVV <br> 83 amino acids $=8.6 \mathrm{kDa}$ |  |  |  |  |  |  |  |
| HNRNPA1-256 |  |  | 2381 | .. 3042 | 662 bp | $\square$ | $\rightarrow$ | prim_transcript |
| /note | $=$ | primary transcript ENST00000678347 |  |  |  |  |  |  |
| HNRNPA1-245 |  |  | 2608 | .. 6895 | 4288 bp | $\square$ | $\rightarrow$ | prim_transcript |

[^0]Feature
HNRNPA1-245
2608 .. $6859 \quad 4252 \mathrm{bp} \quad \square \quad \rightarrow \quad$ CDS

- 3 segments $=245 \mathrm{bp}$

| /note | $=$ coding sequence ENSP000000504642 |
| :--- | :--- |
| /translation | $=$ VALVAAVVVVDMVAVGMAIMDLVMM,,GGVCY*SYQLLKTETHLSKFVAER,,NVLVKTFI*ATVLRYHCHAVYMSCSAAQIPFC |


| /translation $=$ | $\quad 8$ ALVAAV ( 2 internal stop codons) |
| ---: | :--- |
|  | 81 codons |


| NRNPA1-217 |  | 2608 | . 4125 | 1518 bp | $\square$ | $\rightarrow$ | prim_transcript |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| /note | $\begin{aligned} = & \text { primary transcript ENST00000676572 } \\ & \text { Nonsense mediated decay } \end{aligned}$ |  |  |  |  |  |  |
| HNRNPA1-230 |  | 2608 | .. 4125 | 1518 bp | $\square$ | $\rightarrow$ | prim_transcript |
| /note | $\begin{aligned} = & \text { primary transcript ENST00000677191 } \\ & \text { Nonsense mediated decay } \end{aligned}$ |  |  |  |  |  |  |
| HNRNPA1-254 |  | 2608 | .. 4125 | 1518 bp | $\square$ | $\rightarrow$ | prim_transcript |
| /note | $\begin{aligned} = & \text { primary transcript ENST00000678212 } \\ & \text { Nonsense mediated decay } \end{aligned}$ |  |  |  |  |  |  |
| HNRNPA1-262 |  | 2608 | .. 4125 | 1518 bp | $\square$ | $\rightarrow$ | prim_transcript |
| /note | $=$ primary transcript ENST00000678456 |  |  |  |  |  |  |
| HNRNPA1-284 |  | 2608 | .. 4125 | 1518 bp | $\square$ | $\rightarrow$ | prim_transcript |


| /note | $=$ | primary transcript ENST00000679344 |
| :--- | :--- | :--- | :--- |
|  | Nonsense mediated decay |  |
| HNRNPA1-262 |  | $2608 \quad 4121 \quad 1514$ |



| /note | $=$ coding sequence ENSP00000502876 |
| :---: | :---: |
| /translation | $=$ VALVAAVV,,VVEATMILGITTISLQILDP*REEILEAEALAPMAVEANTLQNHETK <br> 55 codons (1 internal stop codon) |






HNRNPA1-267

| 4517 | .. 6540 | 2024 bp | $\square$ | $\rightarrow$ | prim_transcript |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5616 | .. 6540 | 925 bp | $\square$ | $\rightarrow$ | prim_transcript |
| 5715 | .. 6859 | 1145 bp | $\square$ | $\rightarrow$ | prim_transcript |
| 5755 | .. 6895 | 1141 bp | $\square$ | $\rightarrow$ | prim_transcript |
| 6055 | .. 6895 | 841 bp | $\square$ | $\rightarrow$ | prim_transcript |
| 6055 | .. 6540 | 486 bp | $\square$ | $\rightarrow$ | prim_transcript |
| 6645 | .. 6895 | 251 bp | $\square$ | $\rightarrow$ | prim_transcript |

/sequence $\quad=$ CTGCCTCCAAAATTTCCTCCCTTCATGGGTCCAAAATTTGAAGACTGATTGTTGTAATTCCCAAAATCATTGTAGCTTCCACCACCTCCAAAATTGCTTC 41\% GC / 30,465.8 Da
gRNA Protospacer
/sequence
Sanger Sequencing Primer
/sequence

## PCR Reverse

/sequence
$=$ ACCTTGGTTTCGTGGTTTTG $45 \%$ GC / 6136.1 Da
$=$ GTTGCACTGCTCAGCTACATTAGGG $52 \% \mathrm{GC} / 7673.0 \mathrm{Da}$

20-mer 3638 .. $3657 \rightarrow 40^{\circ} \mathrm{C}$ Jun 14, 2022

20-mer 3758 .. $3777-56^{\circ} \mathrm{C}$ Jun 14,2022

25-mer 4186 .. $4210-63^{\circ} \mathrm{C}$ Jun 14, 2022


[^0]:    $=$ primary transcript ENST00000677778

