



INK2J00090_MATR3_F115C_A04_BB
1435 bp

5' TGCATACATCAGGAATCTGTTTAAGATATGTAATAAATTCCTTGTAAGTTTGAGATCTTAAATGTTTTTTTTTAAATCAACATG 85
 3' ACGTATGTAGTCCTTAGACAAATTCTATACATTATTTAAGGAACATTCAAACCTCTAGAATTTACAAAAAAAAAATTTAGTTGTAC

MATR3
 MATR3-201

ATGCATAAGTTTTTTTTCTTAAAAAACGGCATCTGCTTAAAGGGATTTATGACTAAAATTGCTTATTTTTCTACAGAGTTGTC 170
 TACGTATTCAAAAAAAAAAGAATTTTTTGGCCGTAGACGAATTTCCCTAAATACTGATTTTAAACGAATAAAAAGATGTCTCAACAG

MATR3
 MATR3-201

PCR Forward
 ATTTTTCTACAGAGTTGTC

PCR Forward
 TGCTGG

TGCTGGTTCTCAGCTTGAAGAAGATTCTGCAGTCCTTATTGATCCTTTTTCTTGGCGTTACCATTTTTGAAGCAAAGTTAACCTA 255
 ACGACCAAGAGTCGAACTTCTTCTAAGACGTCAGGAATAACTAGGAAAAAGAACC GCAATGGTAAAAACTTCGTTTTCAATTGGAT

MATR3
 MATR3-201

GCTTTCTAGTTTGAGCTTTCTTTTTGGCCGTCTTAAAAAATTTTTTTTTTAAATCTATAAAATAGACAAGAGCTAGTTCTACA 340
 CGAAAGATCAAACCTCGAAAGAAAAACCGGCAGAAATTTTTTAAAAAATAAATTAGATATTTTATCTGTTCTCGATCAAGATGT

MATR3
 MATR3-201

ATGTCCAAGTCATTCCAGCAGTCATCTCTCAGTAGGGACTCACAGGGTCATGGGCGTGACCTGTCTGCGGCAGGAATAGGCCTTC 425
 TACAGGTTTCAGTAAGGTCGTCAGTAGAGAGTCAATCCCTGAGTGTCCAGTACCCGCACTGGACAGACGCCGTCTTATCCGGAAG

MATR3
 MATR3-201

1 5 10 15 20 25
 M S K S F Q Q S S L S R D S Q G H G R D L S A A G I G L
 ENS E00003774855
 MATR3-201

TTGCTGCTGCTACCCAGTCTTTAAGTATGCCAGCATCTCTTGGAAAGGATGAACCAGGGTACTGCACGCCTTGCTAGTTTAATGAA 510
 AACGACGACGATGGGTCAGAAATTCATACGGTCGTAGAGAACCTTCTACTTGGTCCCATGACGTGCGGAACGATCAAATTACTT

MATR3
 MATR3-201

30 35 40 45 50 55
 L A A A T Q S L S M P A S L G R M N Q G T A R L A S L M N
 ENS E00003774855
 MATR3-201

TCTTGGAAATGAGTTCTTCATTGAATCAACAAGGAGCTCATAGTGCACCTGTCTTCTGCTAGTACTTCTCCATAATTTGCAGTCT 595
 AGAACCTTACTCAAGAAGTAACTTAGTTGTTTCTCGAGTATCACGTGACAGAAGACGATCATGAAGAAGGGTATTAACGTCAGA

MATR3
 MATR3-201

60 65 70 75 80 85
 L G M S S S L N Q Q G A H S A L S S A S T S S H N L Q S
 ENS E00003774855
 MATR3-201

Donor Template WT -> SNV

TCCACTCCCTTTATCTTCTCAACACCGTGGAGATGCAGACCAGGCCAGTAACATTTTGGCCA

ATATTTAACATTGGAAGTAGAGGTCCACTCCCTTTATCTTCTCAACACCGTGGAGATGCAGACCAGGCCAGTAACATTTTGGCCA
TATAAATTGTAACCTTCATCTCCAGGTGAGGGAAATAGAAGAATTGTGGCACCTCTACGTCTGGTCCGGTCATTGTA AAAACCGGT

680

MATR3

MATR3-201

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

ENSE0003774855

MATR3-201

Donor Template Sequence WT -> SNV

PAM

Donor Template WT -> SNV

GCTTGGTCTGTCTGCTAGAGACTTAGATGAACTGAGT

GCTTGGTCTGTCTGCTAGAGACTTAGATGAACTGAGTCGTTATCCAGAGGACAAGATTACTCCTGAGAATTTGCCCAAATCCT
CGAAACCAGACAGACGATCTCTGAATCTACTTGACTCAGCAATAGGTCTCCTGTTCTAATGAGGACTCTTAAACGGGGTTTAGGA

765

MATR3

MATR3-201

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

ENSE0003774855

MATR3-201

Donor Template Sequence WT -> SNV

gRNA Protospacer Sequence

SNV

CGAAACCAGACAGACGATCT

gRNA Protospacer

TCTACAGCTTAAAAGGAGGAGAAGTGAAGAAGGCCCTACCTTGAGTTATGGTAGAGATGGCAGATCTGCTACACGGGAGCCACCA
AGATGTCGAATTTTCTCCTCTTGACTTCTTCCGGGATGGAAGTCAATACCATCTCTACCGTCTAGACGATGTGCCCTCGGTGGT

850

MATR3

MATR3-201

L Q L K R R R T E E G P T L S Y G R D G R S A T R E P P

ENSE0003774855

MATR3-201

CCTCTTGACTTCTTCCGGGA

Sanger Sequencing Primer

TACAGAGTACCTAGGGATGATTGGGAAGAAAAAGGCACCTTTAGAAGAGATAGTTTTGATGATCGTGGTCTAGTCTCAACCCAG
ATGTCTCATGGATCCCTACTAACCCTTCTTTTTCCGTGAAATCTTCTCTATCAAACTACTAGCACCAGGATCAGAGTTGGGTC

935

MATR3

MATR3-201

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

ENSE0003774855

MATR3-201

1020

TGCTTGATTATGACCATGGAAGTCGTTCTCAAGAATCTGGTTATTATGACAGAATGGATTATGAAGATGACAGATTAAGAGATGG
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 ACGAACTAATACTGGTACCTTCAGCAAGAGTTCTTAGACCAATAATACTGTCTTACCTAATACTTCTACTGTCTAATTCTCTACC

MATR3 >
 MATR3-201 >

200 205 210 215 220 225
 V L D Y D H G S R S Q E S G Y Y D R M D Y E D D R L R D G

ENSE00003774855 >
 MATR3-201

1105

AGAAAGGTGTAGGGATGATTCTTTTTTGGTGAGACCTCGCATAACTATCATAAATTTGACAGTGAGTATGAGAGAATGGGACGT
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 TCTTCCACATCCCTACTAAGAAAAAACCACTCTGGAGCGTATTGATAGTATTTAAACTGTCACCTCATACTCTCTTACCCTGCA

MATR3 >
 MATR3-201 >

230 235 240 245 250 255
 E R C R D D S F F G E T S H N Y H K F D S E Y E R M G R

ENSE00003774855 >
 MATR3-201

CTCATACTCTCTTACCCTGCA
 PCR Reverse

1190

GGTCCTGGCCCTTACAAGAGAGATCTCTCTTTGAGAAAAAGAGAGGCGCTCCTCCAAGTAGCAATATTGAAGACTTCCATGGAC
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 CCAGGACCGGGGAATGTTCTCTCTAGAGAGAAACTCTTTTTCTCTCCGCGAGGAGGTTTCATCGTTATAACTTCTGAAGGTACCTG

MATR3 >
 MATR3-201 >

260 265 270 275 280
 G P G P L Q E R S L F E K K R G A P P S S N I E D F H G

ENSE00003774855 >
 MATR3-201

CCAG
 PCR Reverse

1275

TCTTACCGAAGGGTTATCCCCATCTGTGCTCTATATGTGATTTGCCAGTTCATTCTAATAAGGTGAGTTAACTCAACAGATGCTT
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 AGAATGGCTTCCAATAGGGGTAGACACGAGATATACCTAAACGGTCAAGTAAGATTATCCACTCAATTGAGTTGTCTACGAA

MATR3 >
 MATR3-201 >

285 290 295 300
 L L P K G Y P H L C S I C D L P V H S N K V S *

ENSE00003774855 >
 MATR3-201

1360

CTAATTTCTTTTACATTGTAGTGCCTATTTACCTATATCTTTGACTCTAATTCTGTAGTCTGATGACATTGAGTTGATCAAGCAT
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 GATTAAGAAAATGTAACATCACGGATAAATGGATATAGAAACTGAGATTAAGACATCAGACTACTGTAACCTCAACTAGTTTCGTA

MATR3 >
 MATR3-201 >

3' 1435
 TTTTAACTTTTGAGAACACTTACTTTATTTGGAAGGTAATTGTTTTTGAGCATTTTAAACCAGGGCTTTACATT
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 AAAATTTGAAAACCTCTGTGAATGAAATAAACCTTCCATTAACAAAACTCGTAAAATTTGGTCCCGAAATGTAA
 5'

MATR3 >
 MATR3-201 >

Feature	Location	Size	Start	End	Type
✓ MATR3	1 .. 1435	1435 bp	■	➔	gene
/note = gene ENSG00000015479 Protein coding					
✓ MATR3-201	1 .. 1435	1435 bp	■	➔	prim_transcript
/note = primary transcript ENST00000394805					
MATR3-203	1 .. 1435	1435 bp	■	➔	prim_transcript
/note = primary transcript ENST00000502499					
MATR3-206	1 .. 1435	1435 bp	■	➔	prim_transcript
/note = primary transcript ENST00000503811					
MATR3-208	1 .. 1435	1435 bp	■	➔	prim_transcript
/note = primary transcript ENST00000504045					
MATR3-209	1 .. 1435	1435 bp	■	➔	prim_transcript
/note = primary transcript ENST00000504311					
MATR3-210	1 .. 1435	1435 bp	■	➔	prim_transcript
/note = primary transcript ENST00000504643 Retained intron					
MATR3-212	1 .. 1435	1435 bp	■	➔	prim_transcript
/note = primary transcript ENST00000507860 Retained intron					
MATR3-214	1 .. 1435	1435 bp	■	➔	prim_transcript
/note = primary transcript ENST00000509918 protein_coding_CDS_not_defined					
MATR3-215	1 .. 1435	1435 bp	■	➔	prim_transcript
/note = primary transcript ENST00000510056					
MATR3-216	1 .. 1435	1435 bp	■	➔	prim_transcript
/note = primary transcript ENST00000511249					
MATR3-218	1 .. 1435	1435 bp	■	➔	prim_transcript
/note = primary transcript ENST00000511978 protein_coding_CDS_not_defined					
MATR3-220	1 .. 1435	1435 bp	■	➔	prim_transcript
/note = primary transcript ENST00000512876					
MATR3-221	1 .. 1435	1435 bp	■	➔	prim_transcript
/note = primary transcript ENST00000513121 Retained intron					
MATR3-222	1 .. 1435	1435 bp	■	➔	prim_transcript
/note = primary transcript ENST00000513678					
MATR3-225	1 .. 1435	1435 bp	■	➔	prim_transcript
/note = primary transcript ENST00000514528					
MATR3-227	1 .. 1435	1435 bp	■	➔	prim_transcript
/note = primary transcript ENST00000618441					
MATR3-238	1 .. 662	662 bp	■	➔	prim_transcript
/note = primary transcript ENST00000514694 Protein coding					
MATR3-224	1 .. 640	640 bp	■	➔	prim_transcript
/note = primary transcript ENST00000514488					
MATR3-230	1 .. 639	639 bp	■	➔	prim_transcript
/note = primary transcript ENST00000502394 Protein coding					
MATR3-205	1 .. 602	602 bp	■	➔	prim_transcript
/note = primary transcript ENST00000503340					
MATR3-213	1 .. 575	575 bp	■	➔	prim_transcript
/note = primary transcript ENST00000508689					

Feature	Location	Size	Start	End	Type
MATR3-207	1 .. 573	573 bp	■	→	prim_transcript
/note	= primary transcript ENST00000504023				
MATR3-233	1 .. 481	481 bp	■	→	prim_transcript
/note	= primary transcript ENST00000505016 Protein coding				
✓ MATR3-201	341 .. 1252	912 bp	■	→	CDS
/note	= coding sequence ENSP00000378284				
/translation	= MSKSFQQSSLSRDSQGHGRDLSAAGIGLLAAATQSLMPASLGRMNQGTARLASLMNLGMSSSLNQQGAHSALSSASTSSHNLSIFNIGSRGPLPLSSQHRGDADQASNILASFGLSARDLDELSPYEDKIPENLPQILLQLKRRRTEEGPTLSYGRDGRSATREPPYRVPRDDWEEKRHFRRDSFDDRGPSLNPVLDYDHGSRSQESGYDRMDYEDDLRLRGERCRRDSSFGETSHNYHKFDSEYERMGRGPGPLQERSLFEKRRGAPSSNIEDFHGLLPKGYPHLCSICDLPVHSNK 304 amino acids = 33.9 kDa				
MATR3-208	341 .. 1252	912 bp	■	→	CDS
/note	= coding sequence ENSP00000423290				
/translation	= MSKSFQQSSLSRDSQGHGRDLSAAGIGLLAAATQSLMPASLGRMNQGTARLASLMNLGMSSSLNQQGAHSALSSASTSSHNLSIFNIGSRGPLPLSSQHRGDADQASNILASFGLSARDLDELSPYEDKIPENLPQILLQLKRRRTEEGPTLSYGRDGRSATREPPYRVPRDDWEEKRHFRRDSFDDRGPSLNPVLDYDHGSRSQESGYDRMDYEDDLRLRGERCRRDSSFGETSHNYHKFDSEYERMGRGPGPLQERSLFEKRRGAPSSNIEDFHGLLPKGYPHLCSICDLPVHSNK 304 amino acids = 33.9 kDa				
MATR3-215	341 .. 1252	912 bp	■	→	CDS
/note	= coding sequence ENSP00000426743				
/translation	= MSKSFQQSSLSRDSQGHGRDLSAAGIGLLAAATQSLMPASLGRMNQGTARLASLMNLGMSSSLNQQGAHSALSSASTSSHNLSIFNIGSRGPLPLSSQHRGDADQASNILASFGLSARDLDELSPYEDKIPENLPQILLQLKRRRTEEGPTLSYGRDGRSATREPPYRVPRDDWEEKRHFRRDSFDDRGPSLNPVLDYDHGSRSQESGYDRMDYEDDLRLRGERCRRDSSFGETSHNYHKFDSEYERMGRGPGPLQERSLFEKRRGAPSSNIEDFHGLLPKGYPHLCSICDLPVHSNK 304 amino acids = 33.9 kDa				
MATR3-227	341 .. 1252	912 bp	■	→	CDS
/note	= coding sequence ENSP00000482895				
/translation	= MSKSFQQSSLSRDSQGHGRDLSAAGIGLLAAATQSLMPASLGRMNQGTARLASLMNLGMSSSLNQQGAHSALSSASTSSHNLSIFNIGSRGPLPLSSQHRGDADQASNILASFGLSARDLDELSPYEDKIPENLPQILLQLKRRRTEEGPTLSYGRDGRSATREPPYRVPRDDWEEKRHFRRDSFDDRGPSLNPVLDYDHGSRSQESGYDRMDYEDDLRLRGERCRRDSSFGETSHNYHKFDSEYERMGRGPGPLQERSLFEKRRGAPSSNIEDFHGLLPKGYPHLCSICDLPVHSNK 304 amino acids = 33.9 kDa				
MATR3-224	341 .. 640	300 bp	■	→	CDS
/note	= coding sequence ENSP00000426801				
/translation	= MSKSFQQSSLSRDSQGHGRDLSAAGIGLLAAATQSLMPASLGRMNQGTARLASLMNLGMSSSLNQQGAHSALSSASTSSHNLSIFNIGSRGPLPLSSQ 100 amino acids = 10.2 kDa				
MATR3-205	341 .. 602	262 bp	■	→	CDS
/note	= coding sequence ENSP00000422590				
/translation	= MSKSFQQSSLSRDSQGHGRDLSAAGIGLLAAATQSLMPASLGRMNQGTARLASLMNLGMSSSLNQQGAHSALSSASTSSHNLSIF 87 amino acids = 8.9 kDa				
MATR3-213	341 .. 575	235 bp	■	→	CDS
/note	= coding sequence ENSP00000422137				
/translation	= MSKSFQQSSLSRDSQGHGRDLSAAGIGLLAAATQSLMPASLGRMNQGTARLASLMNLGMSSSLNQQGAHSALSSAST 78 amino acids = 7.9 kDa				
MATR3-207	341 .. 573	233 bp	■	→	CDS
/note	= coding sequence ENSP00000421145				
/translation	= MSKSFQQSSLSRDSQGHGRDLSAAGIGLLAAATQSLMPASLGRMNQGTARLASLMNLGMSSSLNQQGAHSALSSAS 77 amino acids = 7.8 kDa				
✓ Donor Template Sequence WT -> SNV	619 .. 718	100 bp	■		misc_feature
✓ PAM	678 .. 680	3 bp	■		misc_feature
✓ gRNA Protospacer Sequence	681 .. 700	20 bp	■		misc_feature
✓ SNV	684 .. 684	1 bp	■		misc_feature
/note	= WT = T SNV = G				
MATR3-226	1020 .. 1435	416 bp	■	→	prim_transcript
/note	= primary transcript ENST00000515833				
MATR3-226	1020 .. 1252	233 bp	■	→	CDS
/note	= coding sequence ENSP00000422054				
/translation	= EKGVGMILFLVRPRITIIINLTVSMREWVVLAPYKRDLSLRKREALLQVAILKTSMDSYRRVIPICALYVICQFILI 77 amino acids = 9.0 kDa				

Feature	Location	Size		Type
MATR3-223	1168 .. 1435	268 bp	■ →	prim_transcript

/note = primary transcript [ENST00000514402](#)
 Retained intron

Primer	Length	Binding Sites	Tm	Date Added
✓ PCR Forward /sequence = ATTTTCTACAGAGTTGTCTGCTGG 40% GC / 7669.1 Da	25-mer	152 .. 176	58°C	Aug 15, 2023
✓ Donor Template WT -> SNV /sequence = TCCACTCCCTTTATCTTCTCAACACCGTGGAGATGCAGACCAGGCCAGTAACATTTGGCCAGCTGTGGTCTGTCTGCTAGAGACTTAGATGAACTGAGT 49% GC / 30,750.0 Da	100-mer	619 .. 718	76°C	Aug 15, 2023
✓ gRNA Protospacer /sequence = TCTAGCAGACAGACCAAAGC 50% GC / 6104.0 Da	20-mer	681 .. 700	56°C	Aug 15, 2023
✓ Sanger Sequencing Primer /sequence = AGGGCCTTCTTCAGTTCTCC 55% GC / 6035.0 Da	20-mer	783 .. 802	58°C	Aug 15, 2023
✓ PCR Reverse /sequence = GACCACGTCCCATTCTCTCATACTC 52% GC / 7472.9 Da	25-mer	1085 .. 1109	60°C	Aug 15, 2023