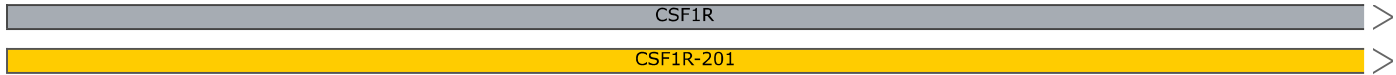


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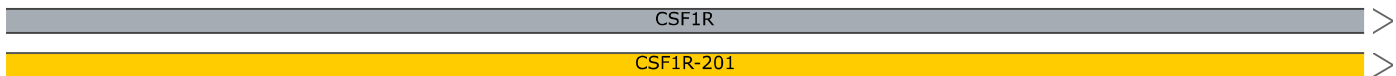
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85



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170



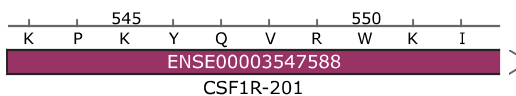
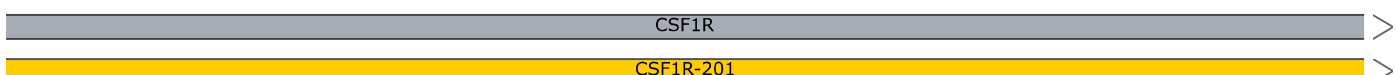
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255



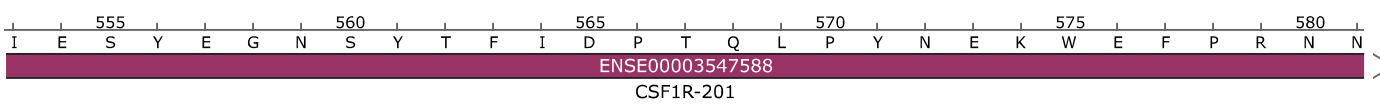
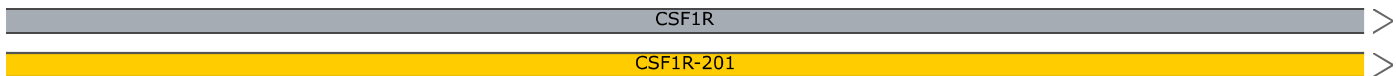
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340



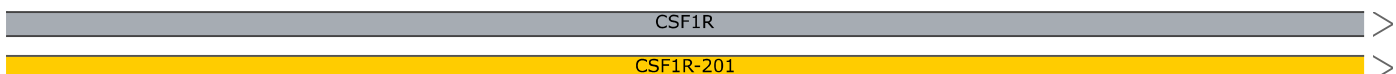
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425



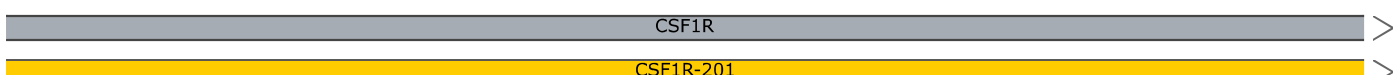
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510



TGGACAGAGGCCCTTTGGTGCCAGGGACTTAAGGGACCTGTGTGCGTGGCAGGTAAGACCCTCGGAGCTGGAGCCTTTGGGAAG
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595



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680

CSF1R

CSF1R-201

V V E A T A F G L G K E D A V L K V A V K M L K

ENSE00003595569

CSF1R-201

AGGGGATGAGGGAAGGGATGGGGGGTGGTAGATGCTGGGGGTGGGCTGGCCCTGGTGTCAACAAGAGGCATCACACACATTTCAAC
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765

CSF1R

CSF1R-201

CSF1R-201

CTGTTGAAGCCTGGGGGACAGAGCTCAGGGGTGAGGACTTGGGTTTTCTTGTGAGCTCCAGGCACCCTCTGACTCCCGGCTCCAA
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850

CSF1R

CSF1R-201

CSF1R-201

GAAGGTCTAGGTCACCCTTTAGTTGTGAAGGGGCTCCTGACTGAGCTCCAAAAAGTCTGGGGGTGCAGAAAGGCCACCTATGGCC
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935

CSF1R

CSF1R-201

CSF1R-201

ATGGCCTGGCCACAGTTTGGCTTCTCTGTCACCTGAAGACCAGCTCAGTGACAGGCTCATCCCTCCTCTCTCTCTGCCATCT
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1020

CSF1R

CSF1R-201

CSF1R-201

GTGTGTCTGCATTTTTCTTCTCCTTCTTTTGGCTTCTGGTCACTCCGGGTCTTGGGGTATGCCCTGCTTTCTCCCCTGGGTCTC
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1105

CSF1R

CSF1R-201

CSF1R-201

TGCATTTGGTCCCATGTATCTGTGTGGTGTCTCTGTCTGCTGCTCCCTCTCCCTGTCTTTGGGACTGTGGTTCTTCTCCCAGCCAC
ACGTAAACCAGGGGTACATAGACACACCACGAGAGACAGGACGGGAGAGGGACAGAAACCTGACACCAAGAAGGAGGGTTCGGTG

1190

CSF1R

CSF1R-201

CSF1R-201

620
S T
ENS...

GGCCCATGCTGATGAGAAAGGAGGCCCTCATGTCCGAGCTGAAGATCATGAGCCACCTGGGCCAGCACGAGAACATCGTCAACCTT
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1275

CSF1R

CSF1R-201

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

ENSE00003586812

CSF1R-201

CTGGGAGCCTGTACCCATGGAGGTAAGGGCCTTGGGGTTCTGGGGCCAAGGTCTTGGGGCCTCTGGGGAATCTCAGGGCCCCAG
GACCCTCGGACATGGGTACCTCCATTCCCAGAACCCCAAGGACCCCGGTTCCAGAACCCCGGAGACCCCTTAGAGTCCCAGGGGTC

1360

CSF1R

CSF1R-201

L G A C T H G

ENSE00003586812

CSF1R-201

GGCTACCTTGTTCGGTCTTCTCCTTCTCAGGATCCTACTGCTCCAAGTGTCAAGGGGATCCCGGTCACAGCATCCCTTAAACTCC
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1445

CSF1R

CSF1R-201

CSF1R-201

TGGGCCCATCTCCTGGAATAGTCAGGAGCTGCACGGGCAGCTTGAGGTATAAAGAGAGACTGATAGGGAGCATCGGAGCCCTTGG
ACCCGGGTAGAGGACCTTATCAGTCCCTCGACGTGCCCGTGAACCTCCATATTTCTCTCTGACTATCCCTCGTAGCCTCGGGAACC

1530

CSF1R

CSF1R-201

CSF1R-201

AGGAGGAGATGAATGTGCAAGCTCCTAGGCCCTGCTTCCAGGGAGCCGGATCCTCTGGGTCTGGAGTGAAGCCCCCGCCTACCT
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1615

CSF1R

CSF1R-201

CSF1R-201

CTTATGAAGCTTCCATTCAAGGATGCTTGGACACTCTCCCCAGGGCCCCAAAGGTGCCCGGGCTTTGCTGGGACTCCAAGTGC
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1700

CSF1R

CSF1R-201

CSF1R-201

CCCACATCCTTCTCACTGATAGCAGCTCTGACCTACAGTGAGCCGCCATAGCTTTCTTTGAAGAAATAATTCTTGGGCTACATT
GGGTGTAGGAGAAGTGACTATCGTCGAGACTGGATGTCACTCGGCGGTATCGAAAGGAAACTTCTTTATTAAGAACCAGATGTAA

1785

CSF1R

CSF1R-201

CSF1R-201

TTTTTTAAGGTTGTCTTTTTTTTTTTCATTTTTTGTTTTTTTTTTCTTGAGACGGAGCCTCACTCTGTCACCCAGGCTGGAGTGCA
AAAAAAAAATCCAACAGAAAAAAAAAAGTAAAAAACAAAAAAAAAAGAAGTCTGCCTCGGAGTGAGACAGTGGGTCCGACCTCACGT

1870

CSF1R

CSF1R-201

CSF1R-201

GTGGTGCGATCTCGGCTCACTGCAACCTCTGCCTCCCAGGTTCAAGCAATTCTCCTGCCTCAACCTCCTGAGTAGTTGGAAGTAC
CACCACGCTAGAGCCGAGTGACGTTGGAGACGGAGGGTCCAAGTTCGTTAAGAGGACGGAGTTGGAGGACTCATCAACCTTGATG

1955

CSF1R

CSF1R-201

CSF1R-201

AGGCACATGCCACCATGCCCGGCTGATTTTTTTGTATTTTTGTAGAGATGGGGTTTCACCATGTTAGCCAGGATGGTCTCGATCT
TCCGTGTACGGTGGTACGGGCCGACTAAAAAACATAAAAAACATCTCTACCCCAAAGTGGTACAATCGGTCCTACCAGAGCTAGA

2040

CSF1R

CSF1R-201

CSF1R-201

CCTGACCTCGTGATCCACCCACCTTGGCCTCCCAAAGTGCTGAGATTACAGGCATGAGCCACCGTGCCCCGCCAAAGCCATCTGT
GGACTGGAGCACTAGGTGGGTGGAACCGGAGGGTTTACGACTCTAATGTCCGTA CTGGTGGCACGGGGCGGTTTCGGTAGACA

2125

CSF1R

CSF1R-201

CSF1R-201

TTTAAACAAATGGAAGTACTGAGGCACAAGGAACTTGCTCACAGAGCCGAGGTTAGAACTCAGCTATGCTGAGTCCAAGTCCAG
AAATTTGTTTACCTTGATGACTCCGTGTTCTTTGAACGAGTGTCTCGGCTCCAATCTTGAGTCGATACGACTCAGGTTTCAGGTC

2210

CSF1R

CSF1R-201

CSF1R-201

TGGCCTCACTGCCCCAGTCTCATGCTCCTGTTTCATGGAGGGGAGCACTCAGCACCTCCCTCACCCACACCTTGGCTGCTCTA
ACCGGAGTGACGGGGGTCAGAGTACGAGGACAAGTACCTCCCTCGTGAGTCGTGGAGGGAGTGGGGTGTGGGAACCGACGAGAT

2295

CSF1R

CSF1R-201

CSF1R-201

GGCCCTGTACTGGTCATCACGGAGTACTGTTGCTATGGCGACCTGCTCAACTTTCTGCGAAGGAAGGCTGAGGCCATGCTGGGAC
CCGGGACATGACCAGTAGTGCCTCATGACAACGATACCGCTGGACGAGTTGAAAGACGCTTCTTCCGACTCCGGTACGACCCTG

2380

CSF1R

CSF1R-201

G P V L V I T E Y C C Y G D L L N F L R R K A E A M L G

ENSE00001023096

CSF1R-201

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2465

CSF1R

CSF1R-201

685 P S L S P G Q D P E G G V D Y K N I H L E K K Y V R R 710

ENSE00001023096

CSF1R-201

CCTGGCAAAGGACAAGAAAAAGGCCAGGTCTGGGAGGCAGGATCCGAGTCTGTCTTCAAAGCCAGCTCAGGGTTGGATGGCTCAT
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2550

CSF1R

CSF1R-201

CSF1R-201

GAATGGGTGGCTATGCAGCCCTCACCTGCCACCTGTGTCATGGGAAGTAGCCACCACAGGTTTTATGGCCATCTCTTGTCTCT
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2635

CSF1R

CSF1R-201

CSF1R-201

ACTCCTTTTCCCTTCATTCAACAAATATTTGAACACCTACCGTGTCTGGGAGTGTGGAGGGCAAAGATGGGCAGCTCATAATC
TGAGGAAAAGGGGAAGTAAGTTGTTTATAAACTTGTGGATGGCACAAGACCCCTCACACCTCCCCTTTCTACCCGTCGAGTATTAG

2720

CSF1R

CSF1R-201

CSF1R-201

TGGTGGAGATATGCATCAATGAAATCACCCACCCAGTGTGTGTAAGATCAACCAAGATCTGTGCCTGGAGCCCTAGTAAGAGAT
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2805

CSF1R

CSF1R-201

CSF1R-201

GGGCAGATGTGGCCGGGTGCAGTGGCTCATGCCTGTAATCCAGCACTTTGGGAGGCTGAGGCGGGCAGATCACCTGAGGATGGG
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2890

CSF1R

CSF1R-201

CSF1R-201

AGTTTCGAGACCAGCCTTACCAACAAGGTGAAACCCCGTCTCTATTAAATATACAAAATAGCCGGGCGTGGTGGCGCATGCCTAT
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2975

CSF1R

CSF1R-201

CSF1R-201

AATCCCAGCTACTCGGGAGGCTGAGGCGGGGAGAATTGCTTGAACCCAGGAGGCAGAGGTTGCTGTGAGCTGAGATCACACCATTG
TTAGGGTCGATGAGCCCTCCGACTCCGCCCTCTTAACGAACTTGGGTCTCCGTCTCCAACGACACTCGACTCTAGTGTGGTAAC

3060

CSF1R

CSF1R-201

CSF1R-201

CACTCCAGCCTGGGCAACAAGAATGAAACTCCGTCTCAAAAAAAAAAGAGAGATGGCTCTGTTGTCCTGTTGCTGTGATTCTCTGGA
GTGAGGTCGGACCCGTTGTTCTTACTTTGAGGCAGAGTTTTTTTTTCTCTCTACCGAGACAACAGGACAACGACACTAAGGACCT

3145

CSF1R

CSF1R-201

CSF1R-201

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3230

CSF1R

CSF1R-201

CSF1R-201

TCAGGGTTAGAGGTGGAGCCTGGACTAGAATCCTGCTCTCTTGACTTCCAGTCCAGGAGTCACCCAAGCCACACTGCTGTCTCTGG
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3315

CSF1R

CSF1R-201

CSF1R-201

AGGTCTCTGTCTCAGGGGCTTGTGGGGTCAGGACAGGATCAGAACAAGAAGGGTGTACTACTGCGCCCTCATCTAGATACTGTCA
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3400

CSF1R

CSF1R-201

CSF1R-201

GCTGCCACGCCTGGGGAGGCAAAAGAGAAGGAGGCCATCTCTTACCCAGGGCCTTAAAAATGGGGGCCTGGCAGCATCACTTCC
CGACGGTGCAGGACCCCTCCGTTTTCTTCTCCTCCGGTAGAGAAGTGGGTCCCGGAATTTTTACCCCGGACCGTCGTAGTGAAGG

3485

CSF1R

CSF1R-201

CSF1R-201

TCTTCTGATTCCCTGACACTTCTATGAGGGTGGCACACACTAGGCCTCTGAAGATCAGATCAAAATGAGCACCAAAGGAAAGTAT
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3570

CSF1R

CSF1R-201

CSF1R-201

TAGCTTCCATCTTCAAATACGCAGATGGGGAAAAGTATTCCCAGAGTGGGTAATTTTCGAGGGCAAATGGCCTGTAAACCAACTCTG
ATCGAAGGTAGAAGTTTATGCGTCTACCCCTTTTCATAAGGGTCTCACCCATTAAGCTCCCGTTTACCGGACATTTGGTTGAGAC

3655

CSF1R

CSF1R-201

CSF1R-201

TCAAAGGATTCCAGGCTGTTAACGGAAGCATAGTTTCTACAAGGGAGCGGAAGGTTTTTTTCGGTTTCTCCTTCTGGGAACACTAG
AGTTTTCCTAAGGTCCGACAATTGCCTTCGTATCAAAGATGTTCCCTCGCCTTCCAAAAAAGCCAAAGAGGAAGACCTTGTGATC

3740

CSF1R

CSF1R-201

CSF1R-201

AATATGGACATTGTCAAGGTACACATCTCTAGCGCAGAGGGGACAGGAGGGAGAGAGAAATCCTATCTGGCTGGAACGTTAGGAG
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3825

CSF1R

CSF1R-201

CSF1R-201

CAGTAGTGCTTCAGTCTACAGTAGTGCTTCTCAAATCTCTACCCCAAGTGTGCTCTCATAGGCATCTCTTGAGGACTGTTGGAA
GTCATCACGAAGTCAGATGTCATCACGAAGAGTTTAAGAGATGGGGTTCACACGAGAGTATCCGTAGAGAACTCCTGACAACCTT

3910

CSF1R

CSF1R-201

CSF1R-201

GTGCACCACCTCAGGCCATCCACCCAGGCCCTGCTGATTCAAATCTGCATTGCAGAGATTCCCGGGGTGATTTATCTGCACATG
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3995

CSF1R

CSF1R-201

CSF1R-201

AGTTGCAGCGTAAGCAGCACTGCTCTAGACCAGTGGGCCCTCAGCTTAGGCTGTACTTTGTGATCACCTGGGGAGATTTAAATCTG
TCAACGTCGCATTCGTCGTGACGAGATCTGGTCACCCGGAGTCGAATCCGACATGAAACACTAGTGGACCCCTCTAAATTTAGAC

4080

CSF1R

CSF1R-201

CSF1R-201

TGAATGACTGTTTTGTCCCTAGAGTTTCTGAAGTATTAGTAATTAGCCTGATCCTAAAAGCTCCCGAAGTGATTTTAATGTGAAG
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4165

CSF1R

CSF1R-201

CSF1R-201

CCAGGGGTGTGAGGCACTGTCCAGAGAAGAGAGGGGCACAAGGGGCCCTAGAATATGCCCAATTCTAGTAGGGGCTGTTATGGGGA
GGTCCCCACACTCCGTGACAGGTCTCTTCTCTCCCGTGTTCGCCGGGATCTTATACGGGGTTAAGATCATCCCCGACAATACCCCT

4250

CSF1R

CSF1R-201

CSF1R-201

AGAGGACTCCAACCTTCTCTGTGGCCCTTGAGGGTAGAGCAGGGGCTAGGAGGAAAATCTCAGGGGTAGATTGGCATTAGGAACAG
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4335

CSF1R

CSF1R-201

CSF1R-201

TGAAGAACTTTCTCACAGGCAGAGCTGCCCAAACCCAGAATGGGTTGTAAGCTCCCTCACCGGGGACAGCCGAGCAGAGACCAAT
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4420

CSF1R

CSF1R-201

CSF1R-201

GCTCACTCAGATGGAGTGTGGCAGGAGGGTTTTCTTATCAGAAAGGGAGGTTCCAGTTGACCATGGGGTGGTGGGTGGTCAAGGCC
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4505

CSF1R

CSF1R-201

CSF1R-201

TGAGCTGAGCAGTGCAGTGATGATGAGTGACCTCTGCCCCCAACCCCTCTCTCCTATGTAGGGACAGTGGCTTCTCCAGCCAGGG
ACTCGACTCGTCCGTCACGTCACTACTCACTGGAGACGGGGGGTTGGGAGAGAGGATACATCCCTGTCACCGAAGAGGTCGGTCCC

4590

CSF1R

CSF1R-201

CSF1R-201

D S G F S S Q G
ENSE00003582642

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ACACCTGTGGATACACCTCTACTCCGGACAGAGGTGAAGAAGTTTACTGAGGAAGAGACTCGTTCCACTCCTCCAGGGTCCC

4675

CSF1R

CSF1R-201

CSF1R-201

720 725 730 735 740
V D T Y V E M R P V S T S S N D S F S E Q

ENSE00003582642

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CCGGGGTAAACGAACATTGTTCCCTTTTCTCTTCCCCGACGACCCCACTCCCCACCCCTCACACCGTCCCGACGGGACTGCGG

4760

CSF1R

CSF1R-201

CSF1R-201

TCTTCCCACCTAGACCTGGACAAGGAGGATGGACGGCCCTGGAGCTCCGGGACCTGCTTCACTTCTCCAGCCAAGTAGCCCAAG
AGAAGGGTGGGATCTGGACCTGTTCTCTCTACCTGCCGGGGACCTCGAGGCCCTGGACGAAGTGAAGAGGTTCGGTTCATCGGGTC

4845

CSF1R

CSF1R-201

D L D K E D G R P L E L R D L L H F S S Q V A Q

ENSE00003499486

CSF1R-201

GGCATGGCCTTCTCGCTTCCAAGAATGTGAGTAGGAACCTGGCCCTGGCTCATAGCCACCCAGGTCTGTGCTCCGGGGAGGCTG
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4930

CSF1R

CSF1R-201

G M A F L A S K N

ENSE00003499486

CSF1R-201

GATGAGTGACGATGGGGAGGAGGAAACGGGAGCCTGTGAGGGGGTAGGGGAGGAGACAGAGTATGAGAGAGTCATTTGGGCAGCA
CTACTCACTGCTACCCCTCCTCCTTTGCCCTCGGACACTCCCCATCCCCTCCTCTGTCTCATACTCTCTCAGTAAACCCGTCGT

5015

CSF1R

CSF1R-201

CSF1R-201

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CGACGTTCTACTCACCCCTCTTTGACACGGGTCCCGACCTCGAGACCCCGACCCGTGGACACAGGGGTTCGCACTTCTACTCCTT

5100

CSF1R

CSF1R-201

CSF1R-201

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5185

CSF1R

CSF1R-201

CSF1R-201

GGGGATGATAACGGAAGCTTCTCAGAATTTGGGGATATTAGATAACGTATAAAGTGCCTCGGCCAGGAAGAAGTGCCAGGG
CCCCACTATTGCCTTCGAAGGAGTCTTAAAACCCCTATAATCTATTGCATATTTACGCGAGCCGGATCCTTCTTACGGTCCC

5270

CSF1R

CSF1R-201

CSF1R-201

AATGGGAGCTCTTGCCATCTTCTTAGAACAGATTCGGGAGTCAGTGGTTTTGATTGTTGGCTCTGCCACCTGCTCCGTGACTTTA
TTACCCTCGAGAACGGTAGAAGGAATCTTGTCTAAGCCCTCAGTCACCAAATAACAACCGAGACGGTGGACGAGGCACTGAAAT

5355

CSF1R

CSF1R-201

CSF1R-201

PCR Forward

GAAAAAGGGTTCAATGTG

AGCAACTATTTAAATTCTGTGCCTCAGTTTCTACACCTATAAAAAATGGGCATAACGATTGTTGAAAAAGAAAAAGGGTTCAATGTG
TCGTTGATAAATTTAAGACACGGAGTCAAAGATGTGGATATTTTTACCCGTATTGCTAACAACCTTTTTCTTTTTCCCAAGTTACAC

5440

CSF1R

CSF1R-201

CSF1R-201

PCR Forward
TGCAGAG

TGCAGAGTTTAGGGAAGGGCCTGGCAGATAGCAGCTGCTATGATCAGAAGTAACGGTAGGGTTTGGAGACTGCTCTCTGCACGGA
ACGTCTCAAATCCCTTCCCGGACCGTCTATCGTTCGACGATACTAGTCTTCATTGCCATCCCAAACCTCTGACGAGAGACGTGCCT

5525

CSF1R

CSF1R-201

CSF1R-201

AGCCCTTCGCTTCTGGGGCCTGAGCAGACCAGTCAGAGGACAAAGGGTGAGAAGGGCCATGGCTGCTCAGGGTAATGGGGGTTTC
TCGGGAAGCGAAGACCCCGGACTCGTCTGGTCAGTCTCCTGTTTCCCACTCTTCCCGGTACCGACGAGTCCCAATTACCCCAAAG

5610

CSF1R

CSF1R-201

CSF1R-201

TAAGCATTAAATGATCAGATCACGATACACATTCTCAGATCCTGGGCCCTGGTAGAAGGTATAGACAAGGGTTTGTGGTAAAGGA
ATTCGTAATTTACTAGTCTAGTGCTATGTGTAAGAGTCTAGGACCCGGGACCATCTTCCATATCTGTTCCCAAACACCATTTCT

5695

CSF1R

CSF1R-201

CSF1R-201

Sanger Sequencing

GTTCACTCCAGCAGGGACTC

Donor Template WT -> SNV

AGGCTCAGGTAGGA

CCAAAACCTGTTGTTCACTCCAGCAGGGACTCCAAAAGCCATGTGGGGCCCTCCCTGCCATCCTCCTCACCTCAGGCTCAGGTAGGA
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5780

CSF1R

CSF1R-201

CSF1R-201

Donor Template WT -> SNV

Donor Template WT -> SNV

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GAAGGCCCAAGACTAACCCCTGCAGTGCTTTCCCTCAGTGCATCCACCGGGACGTGGCAG^CGCGTAACGTGCTGTTGACCAATGGT
CTTCCGGGTTCTGATTGGGACGTACGAAAGGGAGTACGTTAGGTGGCCCTGCACCGT^CGCGCATTGCACGACAACCTGGTTACCA

5865

CSF1R

CSF1R-201

775 | | | | | 780 | | | | | 785
C I H R D V A A R N V L L T N G

ENSE00003511616

CSF1R-201

Donor Template WT -> SNV



CCTGCACCGTCGCGCATTGC
gRNA Protospacer

Donor Template WT -> SNV



CATGTGGCCAAGATTGGGGACTTCGGGCTGGCTAGGGACATCATGAATGACTCCAACCTACATTGTCAAGGGCAATGTAAGTGCTG
GTACACCGGTTCTAACCCCTGAAGCCCCGACCGATCCCTGTAGTACTTACTGAGGTTGATGTAACAGTTCCCGTTACATTACGAC

5950

CSF1R

CSF1R-201

790 | | | | | 795 | | | | | 800 | | | | | 805 | | | | | 810
H V A K I G D F G L A R D I M N D S N Y I V K G N

ENSE00003511616

CSF1R-201

Donor Template WT -> SNV

GGAGGGCTTGGGCCAGGCTGGGGAGGGGGTGAAGAGTCGGGGCCCCAAAATAACTGGGGACTGTGCATCCCAGGCCCGCCTGCCTGT
CCTCCCGAACCCGGTCCGACCCCTCCCCCACTTCTCAGCCCCGGGTTTTATTGACCCCTGCAGTAGGGTCCGGGGCGGACGGACA

6035

CSF1R

CSF1R-201

815
A R L P V

ENSE00003625490

CSF1R-201

GAAGTGGATGGCCCCAGAGAGCATCTTTGACTGTGTCTACACGGTTTCAGAGCGACGTCTGGTCCTATGGCATCCTCCTCTGGGAG
CTTCACTACCGGGTCTCTCGTAGAAACTGACACAGATGTGCCAAGTCTCGCTGCAGACCAGGATACCGTAGGAGGAGACCCCTC

6120

CSF1R

CSF1R-201

820 | | | | | 825 | | | | | 830 | | | | | 835 | | | | | 840 | | | | | 845
K W M A P E S I F D C V Y T V S D V W S Y G I L L W E

ENSE00003625490

CSF1R-201

ATCTTCTCACTTGGTGAGCCACTGGGCCCACTCCAGGCAGAGCCTGGGGCTGGCTCCTCTGGTTGCCCACTGGTGGACAAAGCT
TAGAAGAGTGAACCACTCGGTGACCCGGGTGAGGTCCGTCTCGGACCCCGACCGAGGAGACCAACGGGGTGACCACCTGTTTCGA

6205

CSF1R

CSF1R-201

850
I F S L

ENSE00003625490

CSF1R-201

GTTTGGTGCCCAGGACACAGCGAGGGTTGGTGAGAGTGCAGGAATGGGCAAGGGCTCTCGAAACCCAGCATCGTGGGCTCCTGCGG
CAAACCACGGGTCTGTGTCGCTCCCAACCACTCTCACGTCTTACCCGTTCCCGAGAGCTTTGGGTCGTAGCACCGAGGACGCC

6290

CSF1R

CSF1R-201

CSF1R-201

GACTCGGCAGACCCTCTGCCCTGACAGGGCGCTCCTTTCTGGCTCTTCCCTCGTTTGTCTCTGCTCAGTTGCTGTTACCTGTTAC
CTGAGCCGTCTGGGAGACGGGGACTGTCCGCGAGGAAAAGACCGAGAAGGGAGCAAACAGAGACGAGTCAACGACAATGGACAATG

6375

CSF1R

CSF1R-201

CSF1R-201

GGGAGCAAACAGAGACGAGTCAACG

PCR Reverse

CCTCCTTTGTCACTGTTTCCCTCCTTTGTCTGAAATCTACAGACCCTTGAAGATGCAGCTCTCTACTACTAGGCTCTAGTAGAAA
GGAGGAAACAGTGACAAAGGGAGGAAACAGACTTTAGATGTCTGGGAACCTTCTACGTGAGAGATGATGATCCGAGATCATCTTT

6460

CSF1R

CSF1R-201

CSF1R-201

GAACTGCTATTTCCCGAGGACTAGGCACAAGGACTTGTACTCAGTTCTTAAATACGCTGCTCCTATACCCTCATAACCACCTGAC
CTTGACGATAAAGGGCTCCTGATCCGTGTTTCTGAACATGAGTCAAGAATTTATGCGACGAGGATATGGGAGTATTGGTGGACTG

6545

CSF1R

CSF1R-201

CSF1R-201

TGTCCACACTTTAACGATACACAGCTGAAGCTTTGGTCTGATTCCAAAGCCTGTGCAAGAATGTTTGGTGTGATAAGGCCTGGAT
ACAGGTGTGAAATTGCTATGTGTCGACTTCGAAACCAGACTAAGGTTTCGGACACGTTCTTACAAACCACACTATTCCGGACCTA

6630

CSF1R

CSF1R-201

CSF1R-201

AGAGGCTCACACCTTCCTAAAGCCTAAGCCTGCCACACACTGGCTGGCACACAGGAAGCACCGGGTAAGAGTAGCTGCTGTTGCA
TCTCCGAGTGTGGAAGGATTTCCGATTCCGGACGGTGTGTGACCGACCGTGTGTCTTTCGTGGCCATTCTCATCGACGACAACGT

6715

CSF1R

CSF1R-201

CSF1R-201

GTGTTGTCAAGTGGGACCCCTTTAAACCCAGTCTAAGATGTGTGTGGGTGTGCGGGAATGGGGAGAAGACAATGGGCATGGCCTCT
CACAACAGTTCACCCCTGGGAAATTTGGGTCAGATTCTACACACACCCACACGCCCTTACCCCTCTTCTGTTACCCGTACCGGAGA

6800

CSF1R

CSF1R-201

CSF1R-201

TACCTGATCTTTGGCCCTTTGCAGGGCTGAATCCCTACCTGGCATCCTGGTGAACAGCAAGTTCTATAAACTGGTGAAGGATGGAT
ATGGACTAGAACCGGAAACGTCCCGACTTAGGGATGGGACCGTAGGACCACTTGTCTGTTCAAGATATTTGACCACTTCTACCTA

6885

CSF1R

CSF1R-201

855 860 865 870
G L N P Y P G I L V N S K F Y K L V K D G

ENSE00003691987

CSF1R-201

ACCAAATGGCCAGCCTGCATTTGCCCAAAGAATATGTAAGCGAAGGGATCCAGGGAGGGAAAAAGGACACCCCAGGCTTTTCGC
TGGTTTACCGGGTCGGACGTAAACGGGGTTTCTTATACATTCGCTTCCCTAGGGTCCCTCCCTTTTCTGTGGGGTCCGAAAGCG

6970

CSF1R

CSF1R-201

875 880 885
Y Q M A Q P A F A P K N I

ENSE00003691987

CSF1R-201

TGAAAGGGATGGAAGGCCGTGTGGCCCTGATCTTTCCCTGTCCAAAATGTTCCAGGGTCAGACTTTATCTCTCCCATAGTGGAC
ACCTTTCCCTACCTTCCGGCACACCGGGACTAGAAAAGGGACAGGTTTTACAAGGTCCAGTCTGAAATAGAGAGGGTATCACCTG

7055

CSF1R

CSF1R-201

CSF1R-201

ACAACAAGCCCCCTTTTGAGTTCAAGCTATGGGGGATGTTCTCAGAGAAGCAGCTGTTCACTAGGGCTGGTCCTAACCGACCACTT
TGTTGTTTCGGGGAAAACCTCAAGTTCGATACCCCTACAAGAGTCTCTTCGTCGACAAGTGATCCCGACCAGGATTGGCTGGTGAA

7140

CSF1R

CSF1R-201

CSF1R-201

TTCCTTTTTTTTTTTTTTTTTTTTTTTGAGACAGCATCTTGCTCTGTAGCCCGGGCTGGAGCGCAGTGATGTGTGCAATCATAGCTC
AAGGAAAAAAAAAAAAAAAAAAAACTCTGTCTGATAGAACGAGACATCGGGCCCGACCTCGCGTCACTACACAGTTAGTATCGAG

7225

CSF1R

CSF1R-201

CSF1R-201

ACTGCAGCCTCAATCTTCAGGGCTCAAGCAATCCTTTGGCCTCAGCCTCCCAAACAGCTGGGACTACAGGTGTGCACCACCAAGC
TGACGTCCGAGTTAGAAGTCCCGAGTTCGTTAGGAAACCGGAGTCCGAGGGTTTGTGACCCCTGATGTCCACACGTGGTGGTTCG

7310

CSF1R

CSF1R-201

CSF1R-201

CCAGCTATTTTTAAAAATTTTTTAGTAGAGATGGGATCTCACTATGTTGTCCAGGCTGGTCTGGAACCTCTGGCCTTATGCAAT
GGTCGATAAAAAATTTTTAAAAAATCATCTCTACCCTAGAGTGATACAACAGGTCCGACCAGACCTTGAGGACCGGAATACGTTA

7395

CSF1R

CSF1R-201

CSF1R-201

CCTCCTGCATCAACCTCCCAAAGTGTGGGATTACAGGAATGAGCCACTGCACCTGTCCCTAAACAGACTTTTAAGAGATCGTTA
GGAGGACGTAGTTGGAGGGTTTCACAACCCTAATGTCTTACTCGGTGACGTGGACAGGGATTTGTCTGAAAATTCTCTAGCAAT

7480

CSF1R

CSF1R-201

CSF1R-201

TTACAGTTACCCTGAGGATACCAAAATGGCCTCATCTGTGAGAATGAGGGTGATGAGAGTACCCTTCTGCAAGGGTTACTGTGAG
AATGTCAATGGGACTCCTATGGTTTTACCGGAGTAGACAGTCTTACTCCCACTACTCTCATGGGAAGACGTTCCCAATGACACTC

7565

CSF1R

CSF1R-201

CSF1R-201

GATTAATGGTAAAGCATGCCAAGGACTTGGCATAGGTTTTATACTAAACTTACTTTGACTGGGTTTGGGGACCTCTGCTGGGTA
CTAATTTACCATTTTCGTACGGTTCCTGAACCGTATCCAAAATATGATTTGAATGAAACTGACCCAAACCCCTGGAGACGACCCAT

7650

CSF1R

CSF1R-201

CSF1R-201

GGTCTCTCTAGGGGTGTGTGTTAATGGCCCCTGGACCCCTAGGGAGCTGCCCATGGGCATCCTCTGTCTTATCTCCCAGATACAGC
CCAGAGAGATCCCCACACACAATTACCGGGGACCTGGGATCCCTCGACGGGTACCCGTAGGAGACAGGATAGAGGGTCTATGTCG

7735

CSF1R

CSF1R-201

CSF1R-201

Y S
ENSE000...

ATCATGCAGGCCTGCTGGGCCCTTGGAGCCACCCACAGACCCACCTTCCAGCAGATCTGCTCCTTCTTCAGGAGCAGGCCCAAG
TAGTACGTCCGGACGACCCGGAACCTCGGGTGGGTGTCTGGGTGGAAGGTCGTCTAGACGAGGAAGGAAGTCTCTCGTCCGGGTTTC

7820

CSF1R

CSF1R-201

ENSE00003647852

CSF1R-201

AGGACAGGAGAGAGCGGGTGAGTGGGGTGAGGCTTGGGGTGGGTGGCCGGTAAAGCACGTTGGGCTGGGCCTGATGGATCTGGAC
TCCTGTCTCTCTCGCCCACTCACCCCACTCCGAACCCCAACCCACCGGCCATTTCTGTGCAACCCGACCCGGACTACCTAGACCTG

7905

CSF1R

CSF1R-201

CSF1R-201

920
E D R R E R
ENSE00003647852

TGACAGTTTCTGGTCCCTCCCACCCCTCAGGACTATACCAATCTGCCGAGCAGCAGCAGAAGCGGTGGCAGCGGCAGCAGCAGCAG
ACTGTCAAAGACCAGGGAGGGTGGGAGTCTGATATGGTTAGACGGCTCGTCTGTCGTTTCGCCACCGTCGCCGTCGTCGTCGTC

7990

CSF1R

CSF1R-201

925 930 935 940
D Y T N L P S S S R S G G S G S S S S
ENSE00003627546

CSF1R-201

TGAGCTGGAGGAGGAGAGCTCTAGTGAGCACCTGACCTGCTGCGAGCAAGGGGATATCGCCAGCCCTTGCTGCGAGCCCAACAAC
ACTCGACCTCCTCCTCTCGAGATCACTCGTGGACTGGACGACGCTCGTTCCCTATAGCGGGTCGGGAACGACGTCGGGTTGTTG

8075

CSF1R

CSF1R-201

E L E E E S S S E H L T C C E Q G D I A Q P L L Q P N N

ENSE00003627546

CSF1R-201

TATCAGTTCTGCTGAGGAGTTGACGACAGGGAGTACCACTCTCCCTCCACAAACTTCAACTCCTCCATGGATGGGGCGACACG
ATAGTCAAGACGACTCCTCAACTGCTGTCCCTCATGGTGAGAGGGGAGGGTGTGTTGAAGTTGAGGAGGTACCTACCCCGCTGTGC

8160

CSF1R

CSF1R-201

970

Y Q F C

ENSE00003627546

CSF1R-201

GGGAGAACATACAAACTCTGCCTTCGGTCAATTTCACTCAACAGCTCGGCCAGCTCTGAAACTTGGGAAGGTGAGGGATTCAGGG
CCCTCTTGATGTTTGAGACGGAAGCCAGTAAAGTGAGTTGTCGAGCCGGGTCGAGACTTTGAACCCTTCCACTCCCTAAGTCCC

8245

CSF1R

CSF1R-201

GAGGTCAGAGGATCCCACTTCTGAGCATGGGCCATCACTGCCAGTCAGGGGCTGGGGGCTGAGCCCTCACCCCCCTCCCTA
CTCCAGTCTCCTAGGGTGAAGGACTCGTACCCGGTAGTGACGGTCAGTCCCGACCCCGACTCGGGAGTGGGGGGGAGGGGAT

8330

CSF1R

CSF1R-201

CTGTTCTCATGGTGTGGCCTCGTGTGTTGCTATGCCAACTAGTAGAACCTTCTTTCTAATCCCTTATCTTCATGGAAATGGAC
GACAAGAGTACCACAACCGGAGCACAAACGATACGGTTGATCATCTTGGAAGAAAGGATTAGGGGAATAGAAGTACCTTTACCTG

8415

CSF1R

CSF1R-201

TGACTTTATGCCTATGAAGTCCCAGGAGCTACACTGATACTGAGAAAACAGGCTCTTTGGGGCTAGACAGACTGGCAGAGAGT
ACTGAAATACGGATACTTCAGGGGTCCTCGATGTGACTATGACTCTTTTGGTCCGAGAAAACCCGATCTGTCTGACCGTCTCTCA

8500

CSF1R

CSF1R-201

GAGATCTCCCTCTCTGAGAGGAGCAGCAGATGCTCACAGACCACACTCAGCTCAGGCCCTTGGAGCAGGATGGCTCCTCTAAGA
CTCTAGAGGGAGAGACTCTCCTCGTCTACGAGTGTCTGGTGTGAGTCGAGTCCGGGGAACCTCGTCTACCGAGGAGATTCT

8585

CSF1R

CSF1R-201

ATCTCACAGGACCTCTTAGTCTCTGCCCTATACGCCGCTTCACTCCACAGCCTCACCCCTCCACCCCCATACTGGTACTGCTG
TAGAGTGTCTGGAGAATCAGAGACGGGATATGCGGCGGAAGTGAGGTGTGAGTGGGGAGGGTGGGGGTATGACCATGACGAC

8670

CSF1R

CSF1R-201

TAATGAGCCAAGTGCCAGCTAAAAGTTGGGGGTGTTCTGCCAGTCCCGTCATTCTGGGCTAGAAGGCAGGGGACCTTGGCATGT
ATTACTCGGTTACCGTCTGATTTTCAACCCCCACAAGACGGGTCAGGGCAGTAAGACCCGATCTTCCGTCCCTTGAACCGTACA

8755

CSF1R

CSF1R-201

GGCTGGCCACACCAAGCAGGAAGCACAAACTCCCCAAGCTGACTCATCCTAACTAACAGTCACGCCGTGGGATGTCTCTGTCCA

CCGACCGGTGTGGTTCGTCTTCGTGTTTGAGGGGGTTCGACTGAGTAGGATTGATTGTCAGTGCGGCACCCTACAGAGACAGGT

CSF1R

CSF1R-201

CATTAACTAACAGCATTAAATGCAGTCA

GTAATTTGATTGTCGTAATTACGTCAGT

3'

8868

5'

CSF1R

CSF1R-201

Feature	Location	Size	Color	Symbol	Type
✓ CSF1R	1 .. 8868	8868 bp	Grey	→	gene
/note	= gene ENSG00000182578 Protein coding				
✓ CSF1R-201	1 .. 8868	8868 bp	Yellow	→	prim_transcript
/note	= primary transcript ENST00000286301				
CSF1R-203	1 .. 8868	8868 bp	Grey	→	prim_transcript
/note	= primary transcript ENST00000504875 Nonsense mediated decay				
CSF1R-210	1 .. 8864	8864 bp	Grey	→	prim_transcript
/note	= primary transcript ENST00000675795				
CSF1R-206	1 .. 2381	2381 bp	Grey	→	prim_transcript
/note	= primary transcript ENST00000513609 Retained intron				
CSF1R-208	1 .. 2381	2381 bp	Grey	→	prim_transcript
/note	= primary transcript ENST00000515239 protein_coding_CDS_not_defined				
✓ CSF1R-201	310 .. 8090	7781 bp	Red	→	CDS
▶ 11 segments	= 1293 bp				
/note	= coding sequence ENSP00000286301				
/translation	= KPKYQVRWKIIESYEGNSYTFIDPTQLPYNEKWEFPRNNLQF,,GKTLGAGA FGKV VEATAFGLGKEDAVLKVAVKMLK,,STAHADEKEALMSELKIMSHLGQHENIVNLLGACTHG,,GPVLVITEYCCYGDLLNFLRRKAEAMLGSPSLSPGQDPEGVDYKNIHLEKKYVRR,,DSGFSSQGVDTYVEMRPVSTSSNDSFSEQ,,DLDKEDGRPLELRDLLHFSSQVAQGMAFLASKN,,CIHRDVAARNVLLTNGHVAKIGDFGLARDIMNDSNYIVKGN,,ARLPVKWMAPE SIFDCVYTVQSDVWSYGILLWEIFSL,,GLNPYPGILVNSKFYKLVKDG YQMAQPAFAPKNI,,YSIMQACWALEP THRPTFQQIC SFLQEQA QFDRRERDYTLSSSRSGGSGSSSSELEEESSSEHLTCCEQGDIAQPLLQPNNYQFC*				
CSF1R-210	310 .. 8090	7781 bp	Red	→	CDS
▶ 11 segments	= 1293 bp				
/note	= coding sequence ENSP00000501699				
/translation	= KPKYQVRWKIIESYEGNSYTFIDPTQLPYNEKWEFPRNNLQF,,GKTLGAGA FGKV VEATAFGLGKEDAVLKVAVKMLK,,STAHADEKEALMSELKIMSHLGQHENIVNLLGACTHG,,GPVLVITEYCCYGDLLNFLRRKAEAMLGSPSLSPGQDPEGVDYKNIHLEKKYVRR,,DSGFSSQGVDTYVEMRPVSTSSNDSFSEQ,,DLDKEDGRPLELRDLLHFSSQVAQGMAFLASKN,,CIHRDVAARNVLLTNGHVAKIGDFGLARDIMNDSNYIVKGN,,ARLPVKWMAPE SIFDCVYTVQSDVWSYGILLWEIFSL,,GLNPYPGILVNSKFYKLVKDG YQMAQPAFAPKNI,,YSIMQACWALEP THRPTFQQIC SFLQEQA QFDRRERDYTLSSSRSGGSGSSSSELEEESSSEHLTCCEQGDIAQPLLQPNNYQFC*				
CSF1R-207	491 .. 6133	5643 bp	Grey	→	prim_transcript
/note	= primary transcript ENST00000515068 Nonsense mediated decay				
✓ Donor Template WT -> SNV	5767 .. 5866	100 bp	Cyan	⊢	misc_feature
✓ PAM	5826 .. 5828	3 bp	Yellow	⊢	misc_feature
✓ Protospacer Sequence	5829 .. 5848	20 bp	Red	⊢	misc_feature
✓ SNV	5840 .. 5840	1 bp	Yellow	⊢	misc_feature
/note	= WT = C SNV = A				
CSF1R-204	7339 .. 8321	983 bp	Grey	→	prim_transcript
/note	= primary transcript ENST00000509861 Retained intron				

Primer	Length	Binding Sites	Tm	Date Added
✓ PCR Forward /sequence = GAAAAAGGGTTCAATGTGTGCAGAG 44% GC / 7819.2 Da	25-mer	5423 .. 5447	59°C	Jan 18, 2023
✓ Sanger Sequencing /sequence = GTTCACTCCAGCAGGGACTC 60% GC / 6078.0 Da	20-mer	5707 .. 5726	60°C	Jan 18, 2023
✓ Donor Template WT -> SNV /sequence = AGGCTCAGGTAGGAGAAGGCCCAAGACTAACCTGCAGTGCTTTCCCTCAGTGCATCCACCGGGACGTGGCAGAGCGTAACGTGCTGT 56% GC / 5680.5 Da	100-mer	5767 .. 5866	81°C	Jan 18, 2023
✓ gRNA Protospacer /sequence = CGTTACGCGCTGCCACGTCC 70% GC / 6029.9 Da	20-mer	5829 .. 5848	65°C	Jan 18, 2023
✓ PCR Reverse /sequence = GCAACTGAGCAGAGACAAACGAGGG 56% GC / 7783.1 Da	25-mer	6338 .. 6362	63°C	Jan 18, 2023