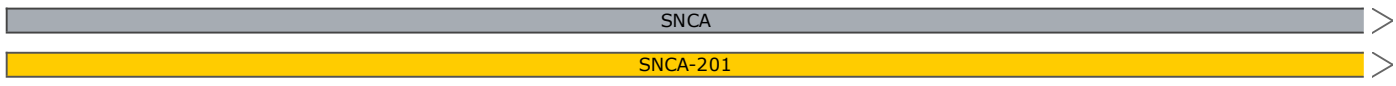


**ASK2J00181R\_SNCA\_A30G\_D06.2\_AA**  
 1935 bp

5'  
3'

GCCTTTCCACCATCAACCTGTTAGCCTTCTTCTGGGATTTCATGTTAAGGATACCCCTGACCCTAAGCCTCCAGCTTCCATGCTTC  
CGGAAAGGTGGTAGTTGGACAATCGGAAGAAGACCCTAAGTACAATTCCTATGGGGACTGGGATTTCGGAGGTCTGAAGGTACGAAG

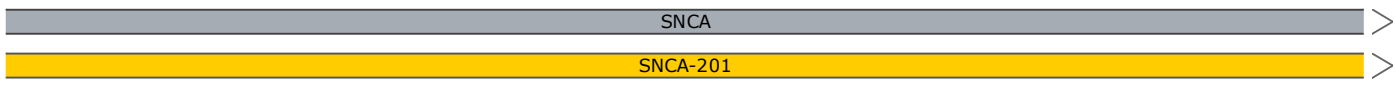
85



PCR Forward  
atcttttcatgcaactccacttctg

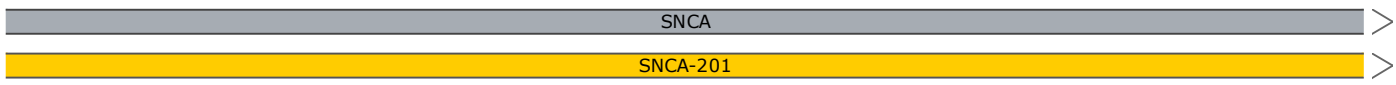
TAACTCATACTGTTACCCTTTAGACCCCGGGAATTTAAAAAGGGGTTAATCTTTTCATGCAACTCCACTTCTGAAATGCAGTAA  
ATTGAGTATGACAATGGGAAATCTGGGGCCCTTAAATTTTTTCCCAATTAGAAAAGTACGTTGAGGTGAAGACTTTACGTCATT

170



TAACTCATACTGTTACCCTTTAGACCCCGGGAATTTAAAAAGGGGTTAATCTTTTCATGCAACTCCACTTCTGAAATGCAGTAA  
ATTGAGTATGACAATGGGAAATCTGGGGCCCTTAAATTTTTTCCCAATTAGAAAAGTACGTTGAGGTGAAGACTTTACGTCATT

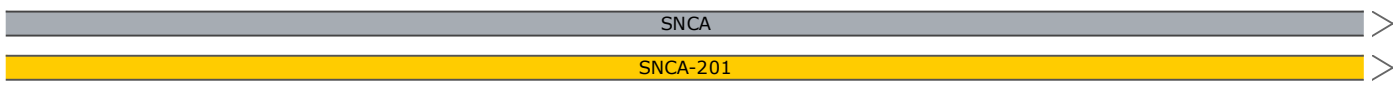
255



Sanger Sequencing Primer  
cacactttggagggttctc

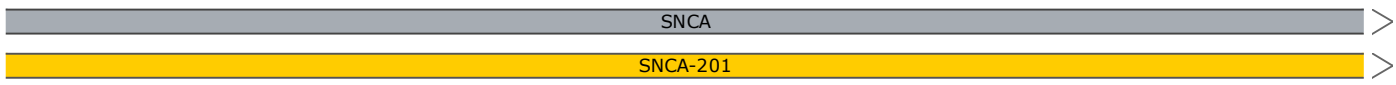
ATGCCAGAGCTAAAAATGTCTGCTTTGTCCAATGGTTAAATGAGTGTACACTTAAAAGAGTCTCACACTTTGGAGGGTTTCTCAT  
TACGGTCTCGATTTTACAGACGAAACAGGTTACCAATTTACTCACATGTGAATTTTCTCAGAGTGTGAAACCTCCCAAAGAGTA

340



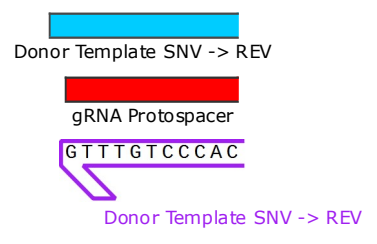
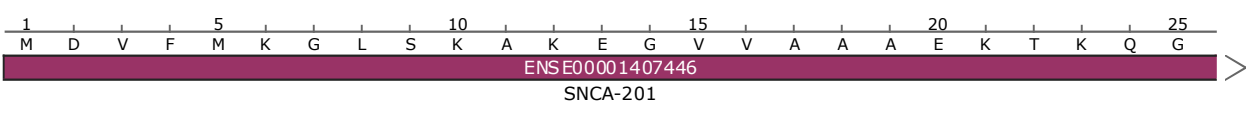
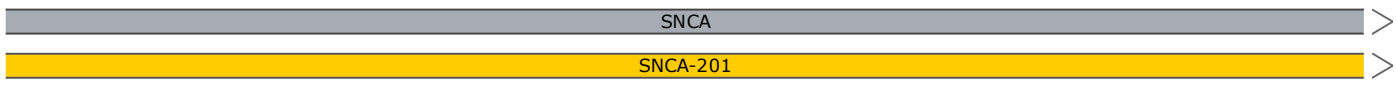
GATTTTTTCAGTGTTTTTTTGTTTATTTTTCCCCGAAAGTTCTCATTCAAAGTGTATTTTATGTTTTCCAGTGTGGTGTAAGGAAT  
CTAAAAAGTCACAAAAACAATAAAAAGGGGCTTTCAAGAGTAAGTTTACATAAAATACAAAAGGTCACACCACATTTCTTTA

425



TCATTAGCCATGGATGTATTCATGAAAGGACTTTCAAAGGCCAAGGAGGGAGTTGTGGCTGCTGCTGAGAAAACCAAACAGGGTG  
AGTAATCGGTACCTACATAAGTACTTTCTGAAAGTTTCCGGTTCCTCCCTCAACACCGACGACGACTCTTTTGGTTTGTCCCAC

510



gRNA Protospacer  
AGCAGGAGGAAAGACAAAAG

TGGCAGAAGCAGCAGGAAAGACAAAAGAGGGTGTCTCTATGTAGGTAGGTAAACCCCAAATGTCAGTTTGGTGCTTGTTCATGA  
ACCGTCTTCGTCGTCCTCTTTCTGTTTTCTCCACAAGAGATACATCCATCCATTTGGGGTTTACAGTCAAACCACGAACAAGTACT

595

SNCA

SNCA-201

V A E A A G K T K E G V L Y V G R +  
ENSE00001407446  
SNCA-201

Donor Template SNV -> REV

gRNA Protospacer

PAM

SNV

ACCGTCTTCGTCGTCCTCTTTCTGTTTTCTCCACAAGAGATACATccatccatttgggggtttacagtcaaaccacgaacaagtact

Donor Template SNV -> REV

GTGATGGGTTAGGATAATCAATACTCTAAATGCTGGTAGTTCTCTCTTTGATTCATTTTTGCATCATTGCTTGTCAAAAAGGTG  
CACTACCCAATCCTATTAGTTATGAGATTTACGACCATCAAGAGAGAGAACTAAGTAAAAACGTAGTAACGAACAGTTTTTCCAC

680

SNCA

SNCA-201

Donor Template SNV -> REV

cact

Donor Template SNV -> REV

GACTGAGTCAGAGGTATGTGTAGGTAGGTGAATGTGAACGTGTGTATTTGAGCTAATAGTAAAAAATGCGACTGTTTGCTTTTCC  
CTGACTCAGTCTCCATACACATCCATCCACTTACACTTGCACACATAAACTCGATTATCATTTTTTACGCTGACAAAACGAAAAGG

765

SNCA

SNCA-201

AGATTTTTAATTTTGCCTAATATTTATGACTTTTTAAAAATGAATGTTTCTGTACCTACATAATTCTATTTTCAGAGAACAGTTT  
TCTAAAAATTA AACGGGATTATAAATACTGAAAAATTTTACTTACAAAGACATGGATGTATTAAGATAAAGTCTCTTGTCAA

850

SNCA

SNCA-201

TAAAAACTCATAGTCTTTTAAAAAATAATCAAGAATATTCTTAAGAATCAAATCATTGATGGATCTGTGATTTCTTTTACCATC  
ATTTTTGAGTATCAGAAAATTTTTATTAGTTCTTATAAGAATCTTAGTTTTAGTAACTACCTAGACACTAAAGAAAATGGTAG

935

SNCA

SNCA-201

ATGAAAAATGTTTGTCAATTTTAAATCCATTCTGATTTTTAAAATATGACTTTGATATGCCCTGTGATGTGTATAAAGAGACCTA  
TACTTTTTACAAACAGTTAAATAGGTAAGACTAAAAATTTTATACTGAAACTATACGGGGACACTACACATATTTCTCTGGAT

1020

SNCA

SNCA-201

ctctggat  
PCR Reverse

TTTGTGGCCCTAAAATGGAAAGAACAGATTAGTCTTTGATAGAGTTACTTCATGTGATCATTGGTCTCTGTGAACACTGAGGAC  
AAACACCGGGATTTTACCTTTCTTGTCTAATCAGAAACTATCTCAATGAAGTACACTAGTAAACCAGAGACACTTGTGACTCCTG

1105

SNCA >

SNCA-201 >

aaacaccgggattttac

PCR Reverse

AGAGAAAAGTGCTTGAGGGCTGCTACTAATCTCTCAGAAACATTTGTATAGTTCATCCATCAAATGACACACATACTAAAAGAAT  
TCTCTTTTACGAACTCCCGACGATGATTAGAGAGTCTTTGTAACATATCAAGTAGGTAGTTTACTGTGTGTATGATTTTCTTA

1190

SNCA >

SNCA-201 >

AAAGAAATTGATGCTTATTACCTACTTGTTCCTAAAGTTCCACCTTGGGGTATACACCCAAACTCTGACTCTCTTTTCTGTAAC  
TTTCTTTAACTACGAATAATGGATGAACAAGGATTTCAAGGTGGAACCCCATATGTGGGTTTGAGACTGAGAGAAAAGACATTGA

1275

SNCA >

SNCA-201 >

TGAACTGTATTCAATTGAGTGTTATTTTACAAACCACTTTGAATTCCTTGGAAAAGAATAGACACACACTCTCATCCACAGGCAT  
ACTTGACATAAGTTAACTCACAATAAAAATGTTGGTGAACCTTAAGGAACCTTTTCTTATCTGTGTGTGAGAGTAGGTGTCCGTA

1360

SNCA >

SNCA-201 >

AGACACACACACTCAACACAGACACATTGCCCATTTCTCTCTCTTTCTCTCTGAGCTTTTTTCACATTCTCTGGTGGCAAC  
TCTGTGTGTGTGAGTTGTGTCTGTGTAACGGGTAAAGAAGGAGAGAAGAAAGAGGAGACTCGAAAAAGTGTAAAGAGACCACCGTTG

1445

SNCA >

SNCA-201 >

TATAGCAGTAAGAGTCACAGGATGAACAGTCAGGTGGAGGATGACCACATTGAGTTGCCTAGCTGAAACATGTGCTCCGTCTATG  
ATATCGTCATTCTCAGTGTCTACTTGTGTCAGTCCACCTCCTACTGGTGAACCTCAACGGATCGACTTTGTACACGAGGCAGATAC

1530

SNCA >

SNCA-201 >

TCTGCAAAGTGAAAGAAAGCTACACTATCTCTTCAACATAGATCAGTGGGGGAAATTTTATACTTGGGATGATTTATATGAATGC  
AGACGTTTCACTTTCTTTCGATGTGATAGAGAAGTTGTATCTAGTCACCCCTTTAAAATATGAACCCTACTAAATATACTTACG

1615

SNCA >

SNCA-201 >

ATCTCATCAAAGTTCACAACACATTTTTTTTTTCAGTTTTTTATTTTTTCAGTTTTTAGAGTCAGGGCCTTGCTCTGTGCCCAGGCT  
TAGAGTAGTTTCAAGTGTTGTGTAAGAAAAAGTCAAAAAATAAAAGTCAAAAAATCTCAGTCCGGAACGAGACAGCGGGTCCGA

1700

SNCA >

SNCA-201 >

GGACTGCAGTGATGCTATCATAGCTCACTGCATCCTTGAATTCCTGGGCTCAAGTCATGCCCCACCTCAGCCTCCTGAGTAGCC  
CCTGACGTCACTACGATAGTATCGAGTGACGTAGGAACTTAAGGACCCGAGTTTCACTACGGGGTGGAGTCGGAGGACTCATCGG

1785

SNCA >

SNCA-201 >

AGGATTATAGGCATGTGCCACTGCCTCATTATTTAGACTTTTCTTATGTTGACTTAATCTTCCACAAATCTTCAATTAATTAATC  
TCCTAATATCCGTACACGGTGACGGAGTAATAAATCTGAAAAGAATACAACCTGAATTAGAAGGGTGTGTTAGAAGTTAATTTAATG

1870

SNCA >

SNCA-201 >

TTTTTTCTACCTTAAAACATATTTTCAGAAAAGTCATTGAAATAGGGTGTACAAGAGGAAAAAA  
-----  
AAAAAAGATGGAATTTGTATAAAAAGCTTTTCAGTAACTTTATCCACAATGTTCTCCTTTTT

3'



















1935

5'



Feature	Location	Size	Start	End	Type
✓ <b>SNCA</b>	1 .. 1935	1935 bp	■	➔	gene
/note	= gene <a href="#">ENSG00000145335</a> Protein coding				
✓ <b>SNCA-201</b>	1 .. 1935	1935 bp	■	➔	prim_transcript
/note	= primary transcript <a href="#">ENST00000336904</a>				
<b>SNCA-203</b>	1 .. 1935	1935 bp	■	➔	prim_transcript
/note	= primary transcript <a href="#">ENST00000394986</a>				
<b>SNCA-204</b>	1 .. 1935	1935 bp	■	➔	prim_transcript
/note	= primary transcript <a href="#">ENST00000394989</a>				
<b>SNCA-205</b>	1 .. 1935	1935 bp	■	➔	prim_transcript
/note	= primary transcript <a href="#">ENST00000394991</a>				
<b>SNCA-206</b>	1 .. 1935	1935 bp	■	➔	prim_transcript
/note	= primary transcript <a href="#">ENST00000420646</a>				
<b>SNCA-209</b>	1 .. 1935	1935 bp	■	➔	prim_transcript
/note	= primary transcript <a href="#">ENST00000506244</a>				
<b>SNCA-210</b>	1 .. 1935	1935 bp	■	➔	prim_transcript
/note	= primary transcript <a href="#">ENST00000506691</a>				
<b>SNCA-211</b>	1 .. 1935	1935 bp	■	➔	prim_transcript
/note	= primary transcript <a href="#">ENST00000508895</a>				
<b>SNCA-213</b>	1 .. 1935	1935 bp	■	➔	prim_transcript
/note	= primary transcript <a href="#">ENST00000618500</a>				
<b>SNCA-214</b>	1 .. 1935	1935 bp	■	➔	prim_transcript
/note	= primary transcript <a href="#">ENST00000673718</a>				
<b>SNCA-216</b>	1 .. 1935	1935 bp	■	➔	prim_transcript
/note	= primary transcript <a href="#">ENST00000673902</a>				
<b>SNCA-217</b>	1 .. 1935	1935 bp	■	➔	prim_transcript
/note	= primary transcript <a href="#">ENST00000674129</a>				
SN CA-AS1 -201	65 .. 1935	1871 bp	■	←	prim_transcript
/note	= primary transcript <a href="#">ENST00000501215</a> lncRNA				
<b>SNCA-207</b>	407 .. 1935	1529 bp	■	➔	prim_transcript
/note	= primary transcript <a href="#">ENST00000502987</a>				
<b>SNCA-208</b>	417 .. 1935	1519 bp	■	➔	prim_transcript
/note	= primary transcript <a href="#">ENST00000505199</a>				
<b>SNCA-202</b>	422 .. 1935	1514 bp	■	➔	prim_transcript
/note	= primary transcript <a href="#">ENST00000345009</a>				
<b>SNCA-212</b>	435 .. 1935	1501 bp	■	➔	prim_transcript
/note	= primary transcript <a href="#">ENST00000611107</a>				
✓ <b>SNCA-201</b>	435 .. 555	121 bp	■	➔	CDS
/note	= coding sequence <a href="#">ENSP00000338345</a>				
/translation	= MDVFMKGLSKAKEGVVAAAETKQGVAAAGKTEGVLYV 40 amino acids = 4.1 kDa				
<b>SNCA-202</b>	435 .. 555	121 bp	■	➔	CDS
/note	= coding sequence <a href="#">ENSP00000343683</a>				
/translation	= MDVFMKGLSKAKEGVVAAAETKQGVAAAGKTEGVLYV 40 amino acids = 4.1 kDa				
<b>SNCA-203</b>	435 .. 555	121 bp	■	➔	CDS
/note	= coding sequence <a href="#">ENSP00000378437</a>				
/translation	= MDVFMKGLSKAKEGVVAAAETKQGVAAAGKTEGVLYV 40 amino acids = 4.1 kDa				
<b>SNCA-204</b>	435 .. 555	121 bp	■	➔	CDS
/note	= coding sequence <a href="#">ENSP00000378440</a>				
/translation	= MDVFMKGLSKAKEGVVAAAETKQGVAAAGKTEGVLYV 40 amino acids = 4.1 kDa				

Feature	Location	Size	Start	End	Type
<b>SNCA-205</b>	435 .. 555	121 bp	■	→	CDS
/note	= coding sequence <a href="#">ENSP00000378442</a>				
/translation	= MDVFMKGLSKAKEGVVAAAETKQGVAAEAGKTEGVLYV 40 amino acids = 4.1 kDa				
<b>SNCA-206</b>	435 .. 555	121 bp	■	→	CDS
/note	= coding sequence <a href="#">ENSP00000396241</a>				
/translation	= MDVFMKGLSKAKEGVVAAAETKQGVAAEAGKTEGVLYV 40 amino acids = 4.1 kDa				
<b>SNCA-207</b>	435 .. 555	121 bp	■	→	CDS
/note	= coding sequence <a href="#">ENSP00000426034</a>				
/translation	= MDVFMKGLSKAKEGVVAAAETKQGVAAEAGKTEGVLYV 40 amino acids = 4.1 kDa				
<b>SNCA-208</b>	435 .. 555	121 bp	■	→	CDS
/note	= coding sequence <a href="#">ENSP00000421485</a>				
/translation	= MDVFMKGLSKAKEGVVAAAETKQGVAAEAGKTEGVLYV 40 amino acids = 4.1 kDa				
<b>SNCA-209</b>	435 .. 555	121 bp	■	→	CDS
/note	= coding sequence <a href="#">ENSP00000422238</a>				
/translation	= MDVFMKGLSKAKEGVVAAAETKQGVAAEAGKTEGVLYV 40 amino acids = 4.1 kDa				
<b>SNCA-210</b>	435 .. 555	121 bp	■	→	CDS
/note	= coding sequence <a href="#">ENSP00000423445</a>				
/translation	= MDVFMKGLSKAKEGVVAAAETKQGVAAEAGKTEGVLYV 40 amino acids = 4.1 kDa				
<b>SNCA-211</b>	435 .. 555	121 bp	■	→	CDS
/note	= coding sequence <a href="#">ENSP00000426955</a>				
/translation	= MDVFMKGLSKAKEGVVAAAETKQGVAAEAGKTEGVLYV 40 amino acids = 4.1 kDa				
<b>SNCA-212</b>	435 .. 555	121 bp	■	→	CDS
/note	= coding sequence <a href="#">ENSP00000479604</a>				
/translation	= MDVFMKGLSKAKEGVVAAAETKQGVAAEAGKTEGVLYV 40 amino acids = 4.1 kDa				
<b>SNCA-213</b>	435 .. 555	121 bp	■	→	CDS
/note	= coding sequence <a href="#">ENSP00000484044</a>				
/translation	= MDVFMKGLSKAKEGVVAAAETKQGVAAEAGKTEGVLYV 40 amino acids = 4.1 kDa				
<b>SNCA-214</b>	435 .. 555	121 bp	■	→	CDS
/note	= coding sequence <a href="#">ENSP00000500990</a>				
/translation	= MDVFMKGLSKAKEGVVAAAETKQGVAAEAGKTEGVLYV 40 amino acids = 4.1 kDa				
<b>SNCA-216</b>	435 .. 555	121 bp	■	→	CDS
/note	= coding sequence <a href="#">ENSP00000501102</a>				
/translation	= MDVFMKGLSKAKEGVVAAAETKQGVAAEAGKTEGVLYV 40 amino acids = 4.1 kDa				
<b>SNCA-217</b>	435 .. 555	121 bp	■	→	CDS
/note	= coding sequence <a href="#">ENSP00000501269</a>				
/translation	= MDVFMKGLSKAKEGVVAAAETKQGVAAEAGKTEGVLYV 40 amino acids = 4.1 kDa				
✓ <b>Donor Template SNV -&gt; REV</b>	499 .. 599	101 bp	■	┌┐	misc_feature
✓ <b>gRNA Protospacer</b>	500 .. 537	38 bp	■	┌┐	misc_feature
✓ <b>SNV</b>	523 .. 523	1 bp	■	┌┐	misc_feature
/note	= SNV = G SNV = C				
✓ <b>PAM</b>	538 .. 540	3 bp	■	┌┐	misc_feature
<b>SNCA-AS1</b>	1448 .. 1935	488 bp	■	←	gene
/note	= gene <a href="#">ENSG00000247775</a> lncRNA				
<b>SNCA-AS1-202</b>	1448 .. 1935	488 bp	■	←	prim_transcript
/note	= primary transcript <a href="#">ENST00000513653</a> lncRNA				

Feature		Location	Size			Type
		1936 291,320	289,385 bp			gene
/note	= gene <a href="#">ENSG00000251095</a> lncRNA					
		1936 291,320	289,385 bp			prim_transcript
/note	= primary transcript <a href="#">ENST00000659878</a> lncRNA					
		1936 150,890	148,955 bp			prim_transcript
/note	= primary transcript <a href="#">ENST00000508021</a> lncRNA					
		1936 119,773	117,838 bp			gene
/note	= gene <a href="#">ENSG00000288563</a> lncRNA					
		1936 119,773	117,838 bp			prim_transcript
/note	= primary transcript <a href="#">ENST00000673949</a> lncRNA					
		1936 .74,496	72,561 bp			prim_transcript
/note	= primary transcript <a href="#">ENST00000507916</a> lncRNA					
		1936 .20,775	18,840 bp			prim_transcript
/note	= primary transcript <a href="#">ENST00000689416</a> lncRNA					
		1936 .20,775	18,840 bp			prim_transcript
/note	= primary transcript <a href="#">ENST00000691837</a> lncRNA					



Primer	Length	Binding Sites	Tm	Date Added
✓ <b>PCR Forward</b>  /sequence = atcttttcattgcaactccacttctg 40% GC / 7518.0 Da	25-mer	135 .. 159 →	58°C	Sep 14, 2023
✓ <b>Sanger Sequencing Primer</b>  /sequence = cacactttggagggtttctc 50% GC / 6099.0 Da	20-mer	319 .. 338 →	56°C	Sep 14, 2023
✓ <b>Donor Template SNV -&gt; REV</b>  /sequence = tcactcatgaacaagcaccacaaactgacatttggggtttacctacCTACATAGAGAACCCTCTTTTGTCTTTCCTGCTGCTTCTGCCACACCTGTTTG 46% GC / 30,474.8 Da	100-mer	500 .. 599 ←	76°C	Sep 14, 2023
✓ <b>gRNA Protospacer</b>  /sequence = AGCAGGAGGAAAGACAAAAG 45% GC / 6266.2 Da	20-mer	518 .. 537 →	50°C	Sep 14, 2023
✓ <b>PCR Reverse</b>  /sequence = cattttagggccacaaataggtctc 44% GC / 7641.0 Da	25-mer	1013 .. 1037 ←	57°C	Sep 14, 2023