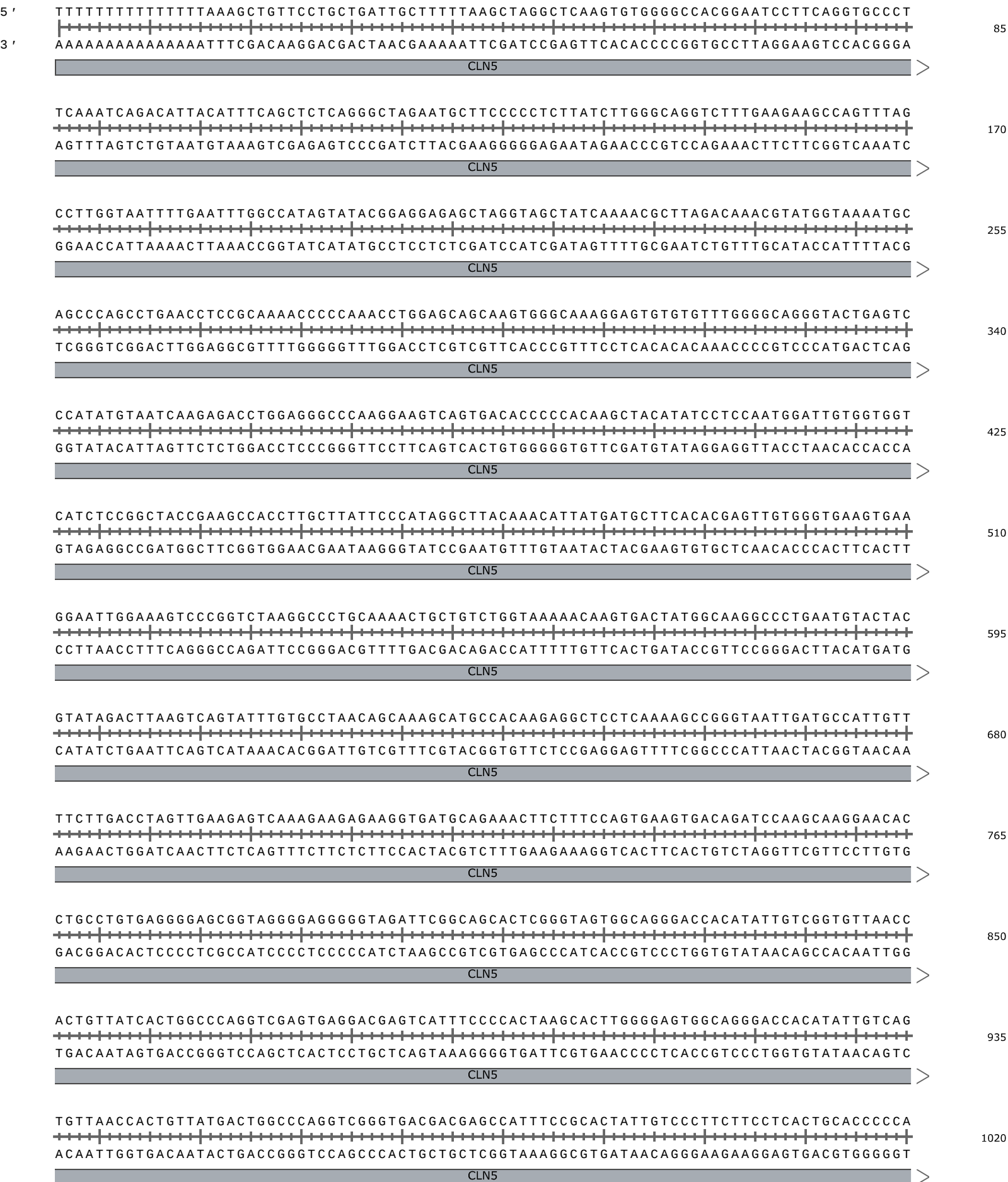


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CLN5-201

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Donor Template SNV -> REV

Protospacer Sequence

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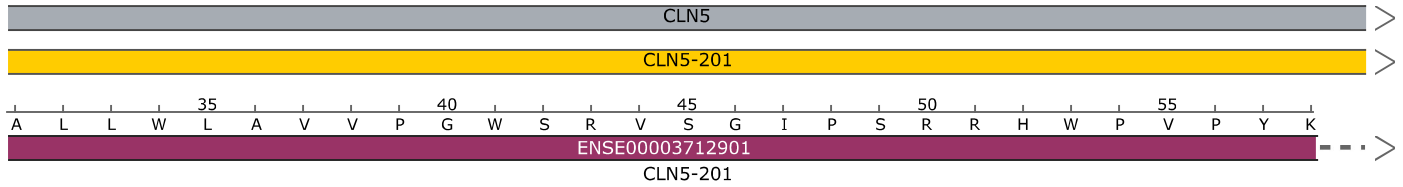
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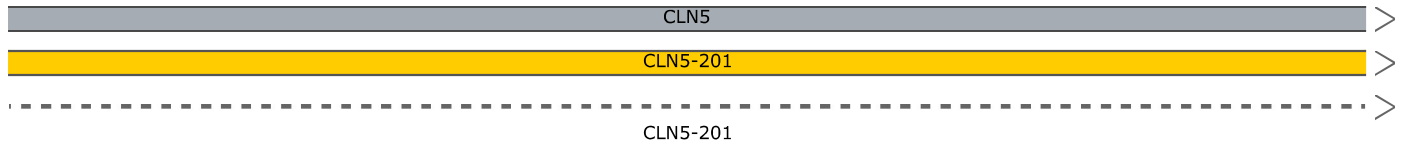
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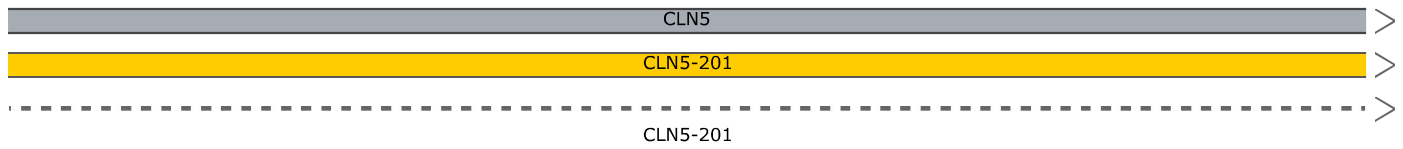
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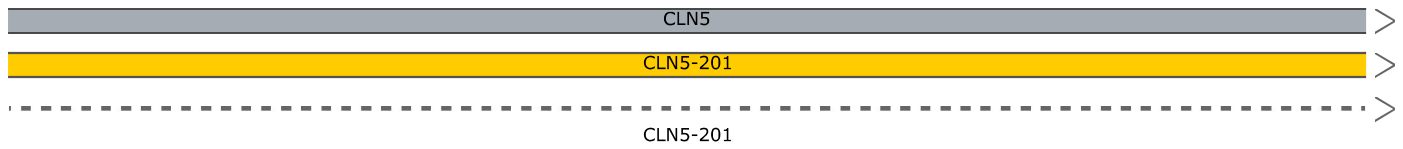
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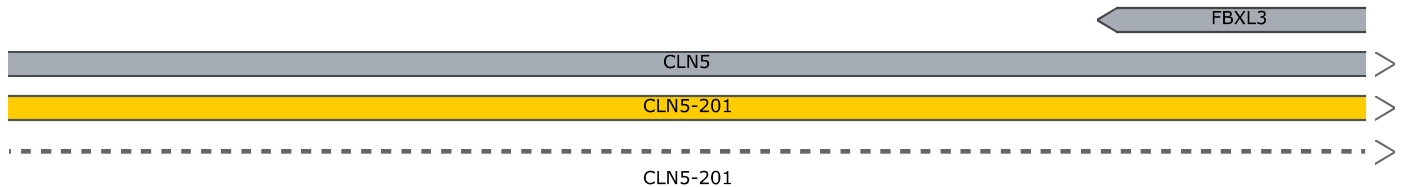
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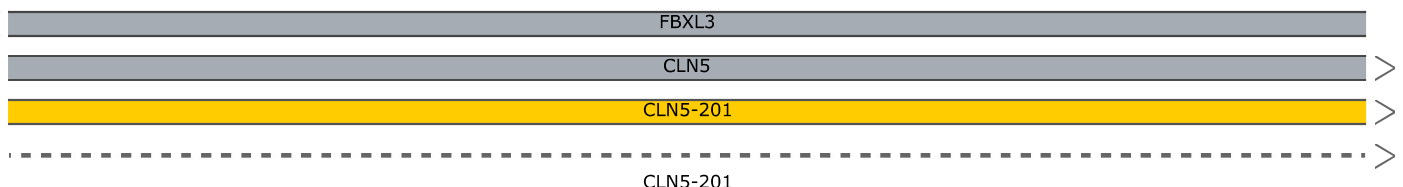
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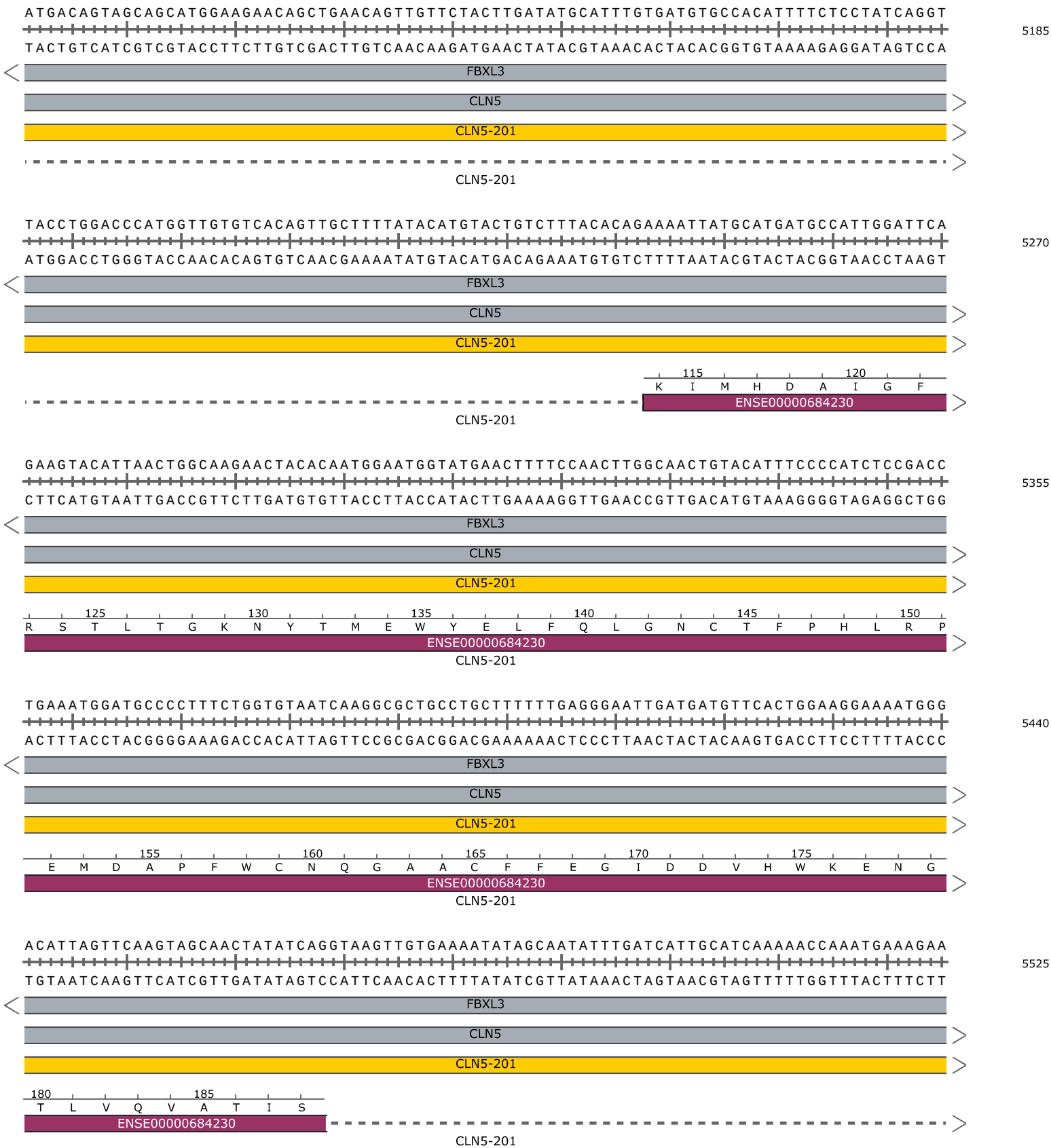
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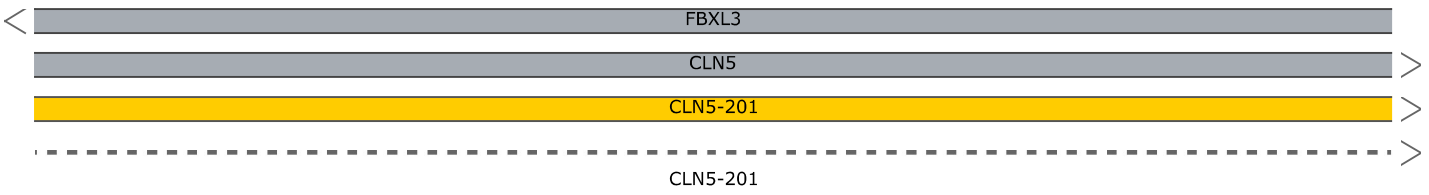
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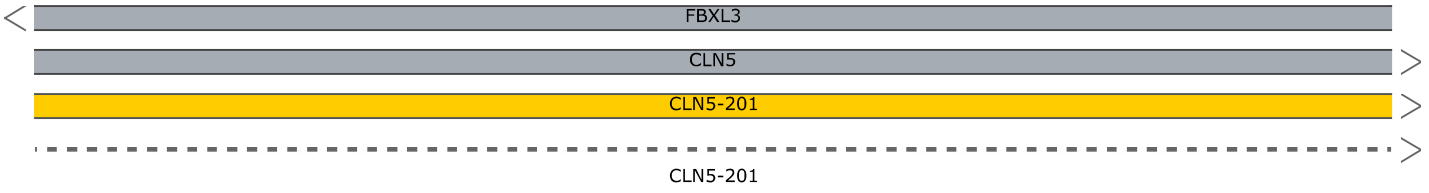
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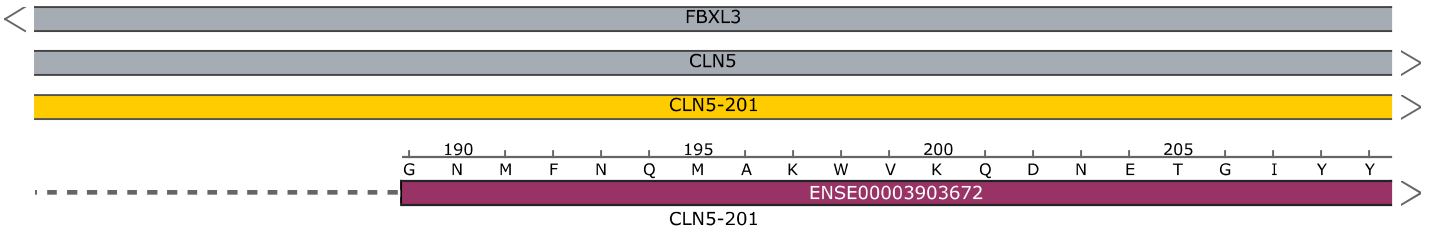
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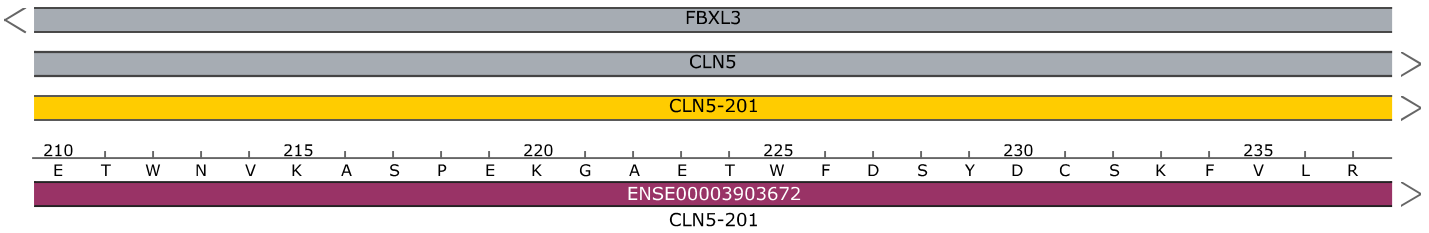
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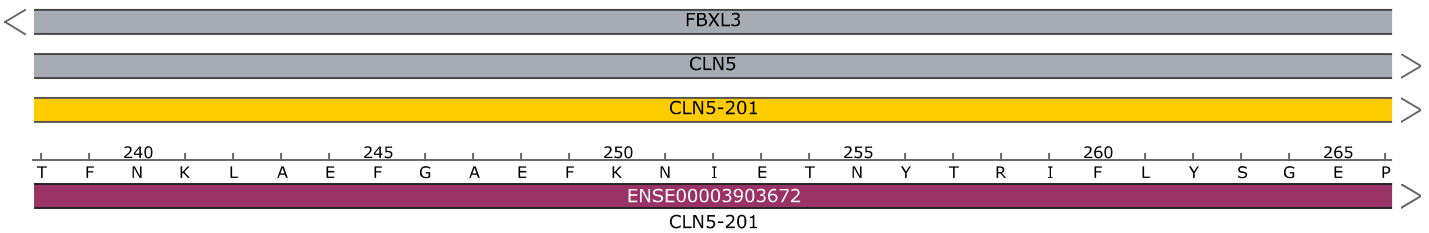
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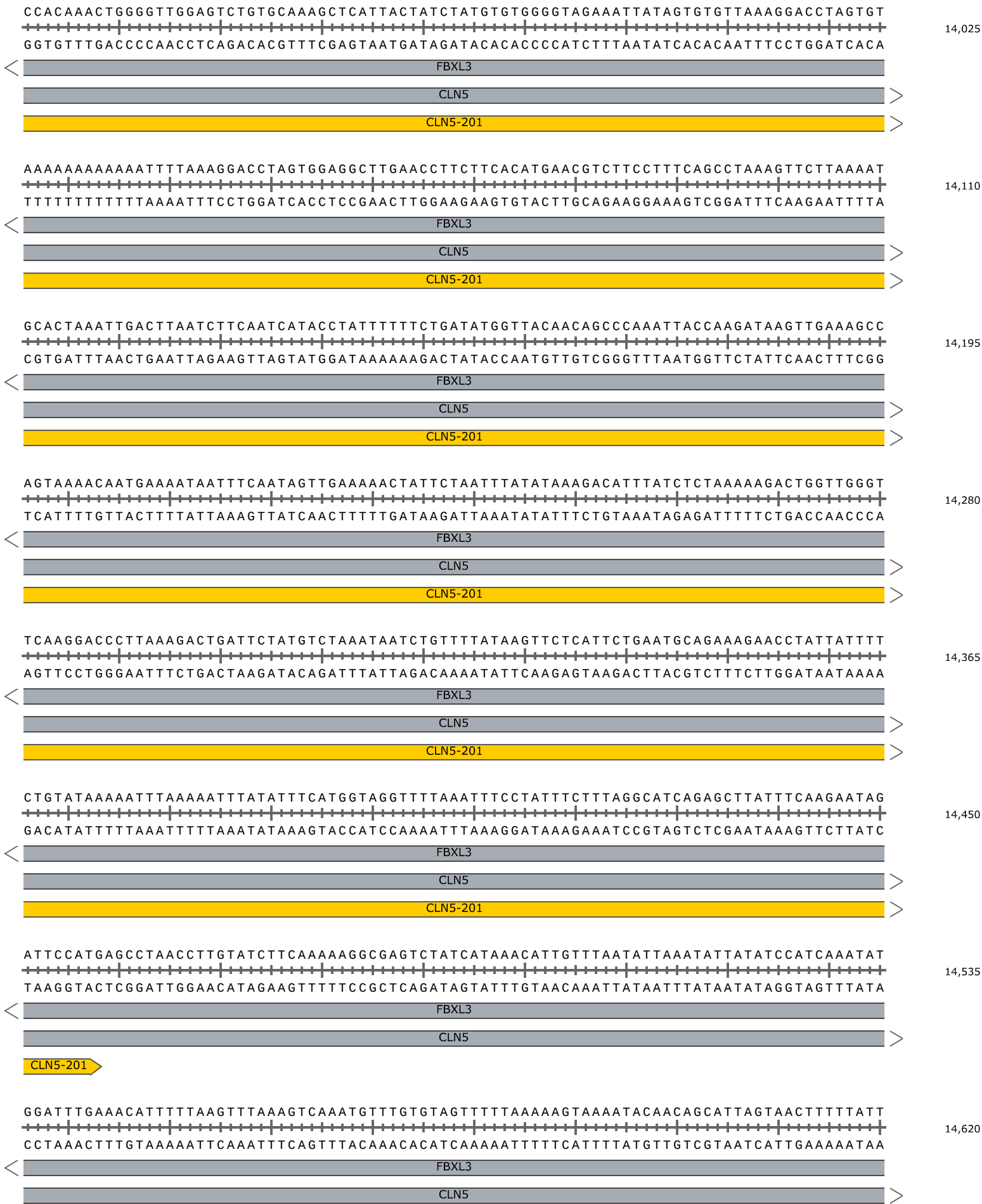












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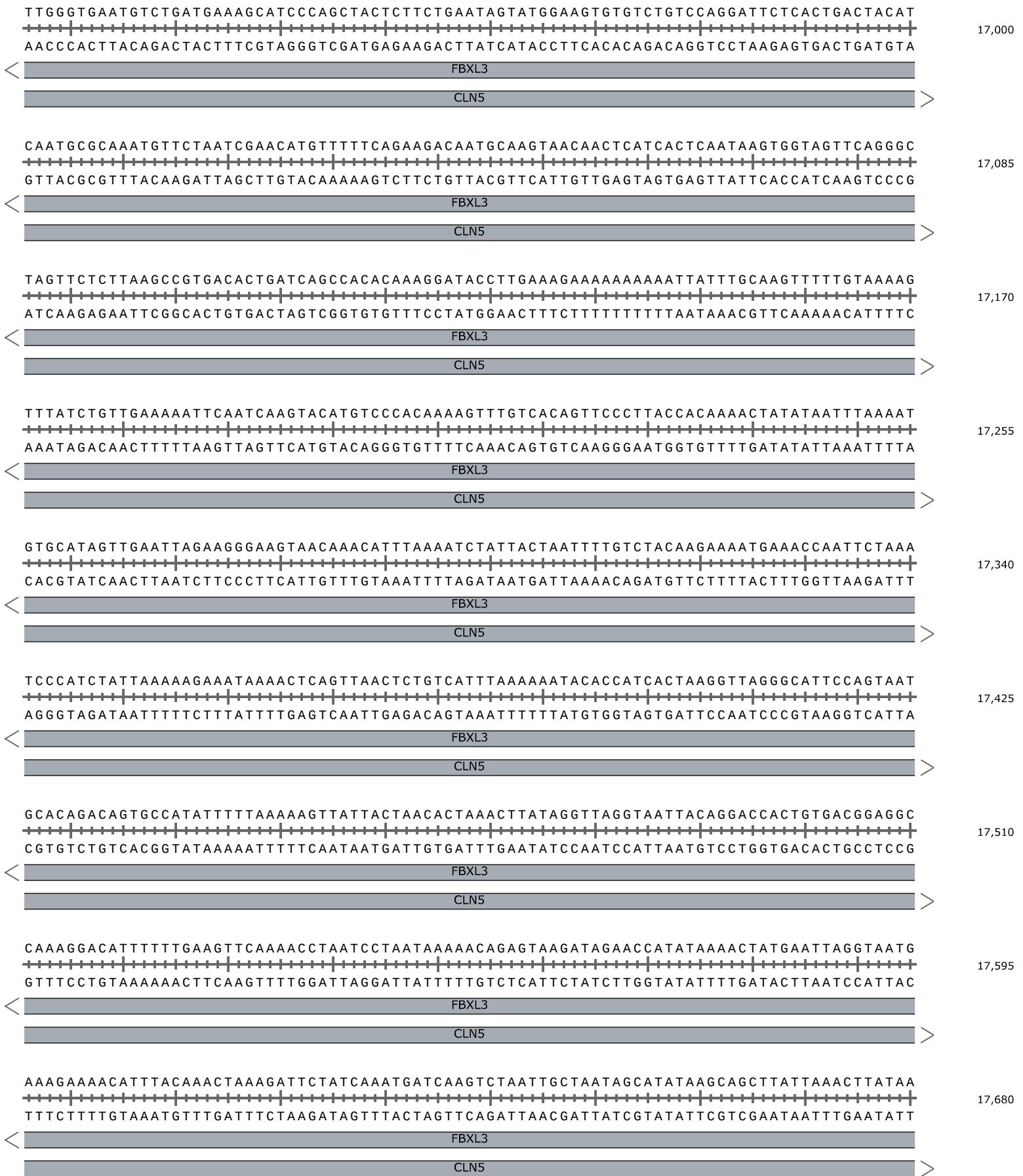
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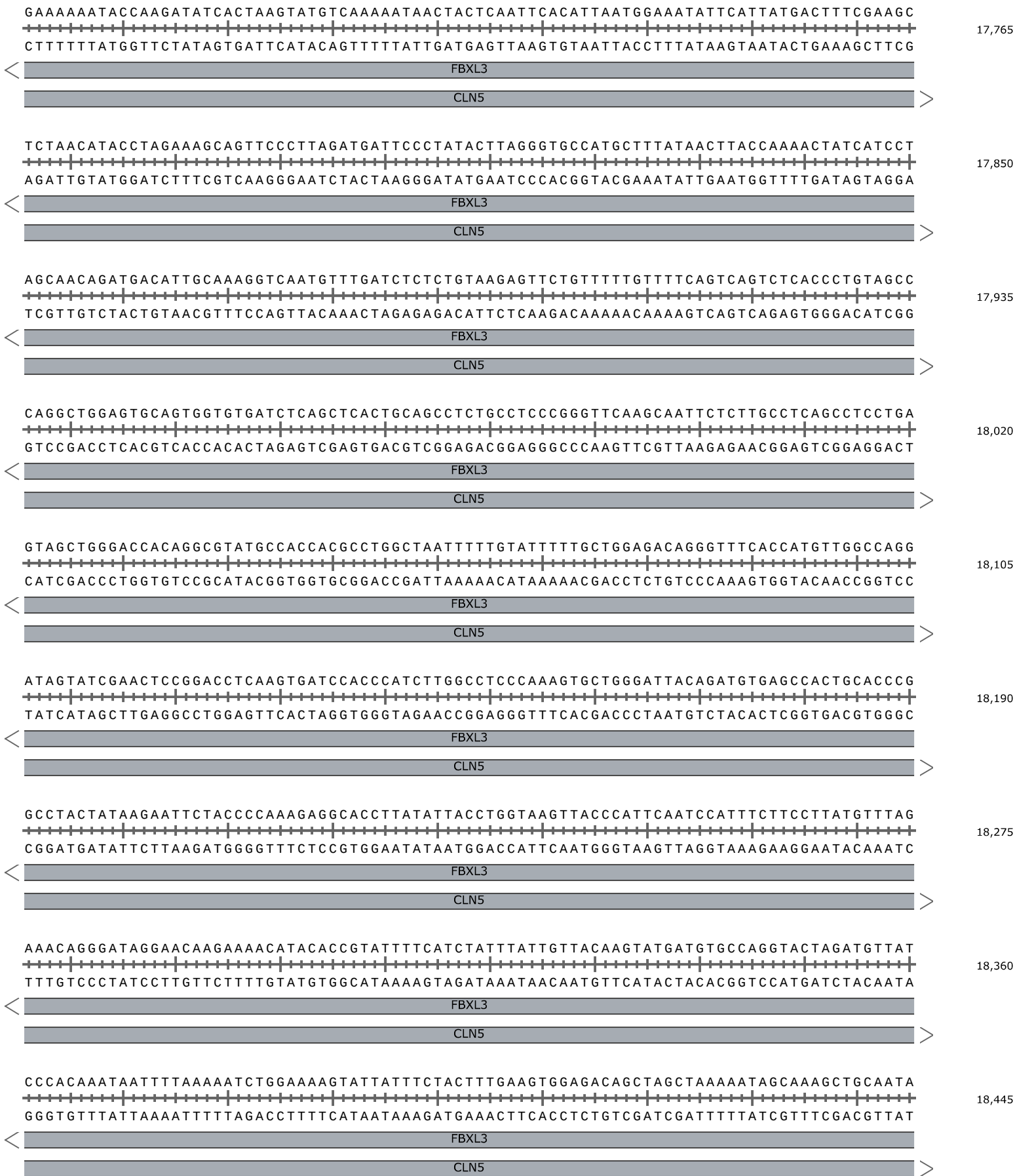
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26,350

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 < FBXL3
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26,435

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 < FBXL3
 CLN5 >

26,520

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 CLN5 >

26,605

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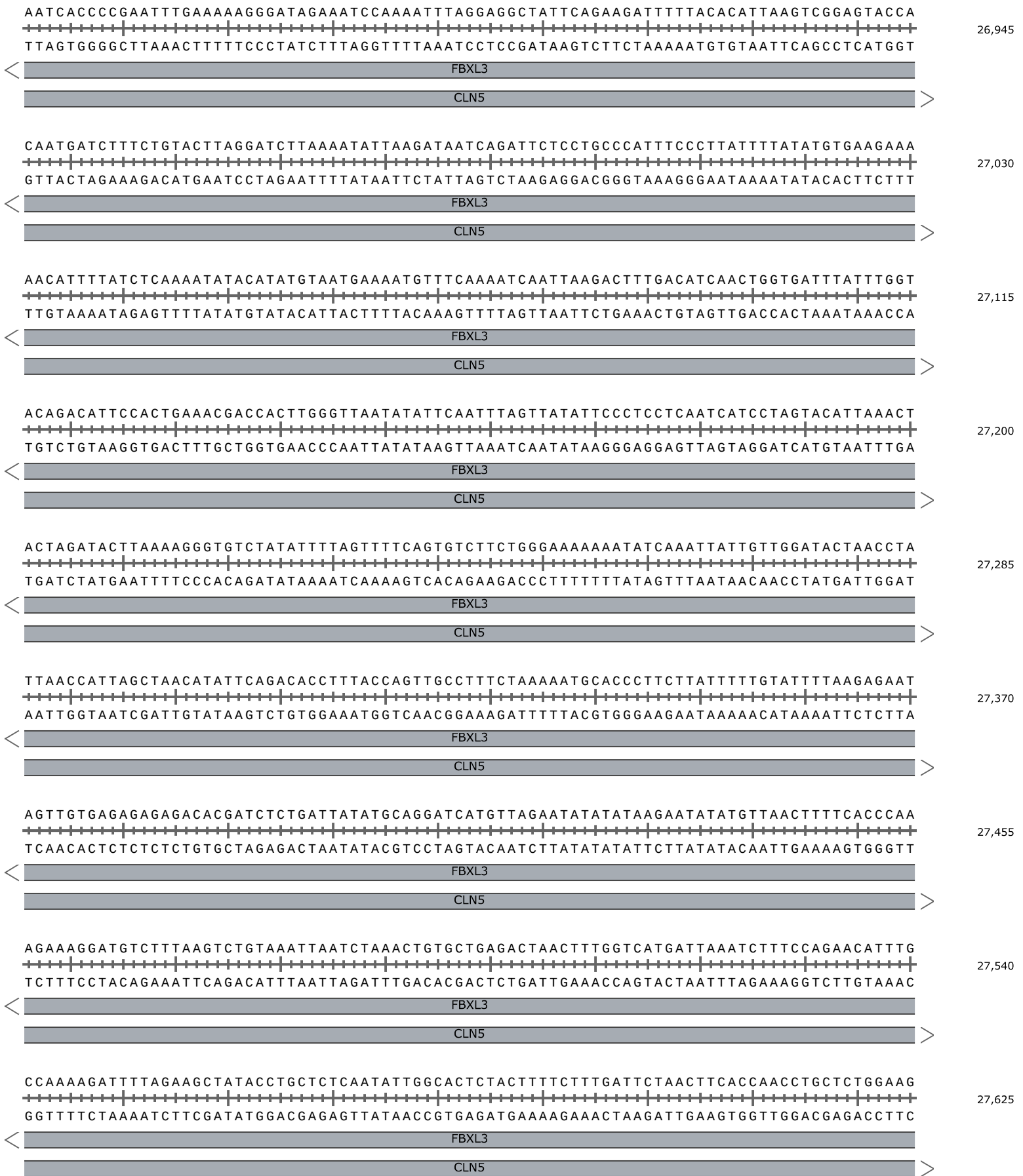
26,690

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26,775

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 < FBXL3
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26,860



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27,710

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27,795

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27,880

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 < FBXL3
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27,965

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 < FBXL3
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28,050

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 < FBXL3
 CLN5 >

28,135

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28,220

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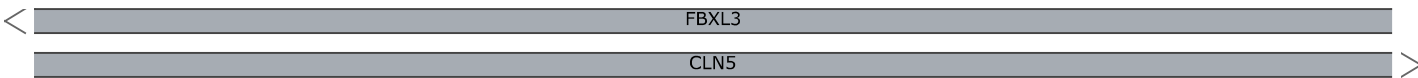
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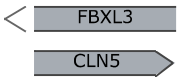
28,390

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+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
CATATTTGATTACCTCATTTAGTTAAATATCAGAAATTTTTTATTAATACATAAAACCATCACCTAGTGTATTATCTACATTTATG

28,475










AGTGTCTAT 3'
+-----+
TCACAGATA 5' 28,484



Feature	Location	Size			Type
✓ CLN5	1 .. 28,484	28,484 bp		→	gene
/note = gene ENSG00000102805 Protein coding					
CLN5-208	1 .. 14,458	14,458 bp		→	prim_transcript
/note = primary transcript ENST00000636183					
CLN5-216	1385 .. 11,818	10,434 bp		→	prim_transcript
/note = primary transcript ENST00000636780					
CLN5-202	1400 .. 7204	5805 bp		→	prim_transcript
/note = primary transcript ENST00000485938					
	1419 ..138,930	137,512 bp		→	gene
/note = gene ENSG00000283208 Protein coding					
	1419 .. 87,366	85,948 bp		→	prim_transcript
/note = primary transcript ENST00000638147 Protein coding					
CLN5-219	1419 .. 9317	7899 bp		→	prim_transcript
/note = primary transcript ENST00000637537					
✓ CLN5-201	1422 .. 14,458	13,037 bp		→	prim_transcript
/note = primary transcript ENST00000377453					
CLN5-218	1428 .. 26,472	25,045 bp		→	prim_transcript
/note = primary transcript ENST00000637397					
CLN5-207	1430 .. 5440	4011 bp		→	prim_transcript
/note = primary transcript ENST00000635989					
CLN5-203	1432 .. 11,686	10,255 bp		→	prim_transcript
/note = primary transcript ENST00000616833					
CLN5-211	1437 .. 28,484	27,048 bp		→	prim_transcript
/note = primary transcript ENST00000636525					
CLN5-215	1439 .. 27,707	26,269 bp		→	prim_transcript
/note = primary transcript ENST00000636767					
CLN5-205	1439 .. 20,309	18,871 bp		→	prim_transcript
/note = primary transcript ENST00000635905 Retained intron					
CLN5-211	1440 .. 26,486	25,047 bp		→	CDS
▶ 5 segments = 813 bp					
/note = coding sequence ENSP00000490078					
/translation = MAQEVDTA QGAEMRRGAGAARGRASWCWALALLWLAVVPGWSRVSGIPSRRHWPVPYK,,RFDFRPKDPYCQAKYTFCPTGSPIPVMEGDD DIEVFRLQAPVWEFKYGDLLGHL,,KIMHDAIGFRSTLTGKNYTMEWYELFQLGNCTFPHLRPEMDAPFWCNQGAACFFEGIDDVHWKENGTLV QVATIS,,GFHHVGQDSIELRTSSDPPILASQSAGITDVSHCTRPTIRILPQRGTLYYL,,LWTKTFLCLSLQFSWDFQNIATPYFNLLPKP* 270 amino acids = 30.7 kDa					
CLN5-215	1440 .. 26,087	24,648 bp		→	CDS
▶ 5 segments = 747 bp					
/note = coding sequence ENSP00000489855					
/translation = MAQEVDTA QGAEMRRGAGAARGRASWCWALALLWLAVVPGWSRVSGIPSRRHWPVPYK,,RFDFRPKDPYCQAKYTFCPTGSPIPVMEGDD DIEVFRLQAPVWEFKYGDLLGHL,,KIMHDAIGFRSTLTGKNYTMEWYELFQLGNCTFPHLRPEMDAPFWCNQGAACFFEGIDDVHWKENGTLV QVATIS,,GFHHVGQDSIELRTSSDPPILASQSAGITDVSHCTRPTIRILPQRGTLYYL,,RWVLLCCPG* 248 amino acids = 28.0 kDa					
CLN5-218	1440 .. 22,246	20,807 bp		→	CDS
▶ 5 segments = 822 bp					
/note = coding sequence ENSP00000490422					
/translation = MAQEVDTA QGAEMRRGAGAARGRASWCWALALLWLAVVPGWSRVSGIPSRRHWPVPYK,,RFDFRPKDPYCQAKYTFCPTGSPIPVMEGDD DIEVFRLQAPVWEFKYGDLLGHL,,KIMHDAIGFRSTLTGKNYTMEWYELFQLGNCTFPHLRPEMDAPFWCNQGAACFFEGIDDVHWKENGTLV QVATIS,,GFHHVGQDSIELRTSSDPPILASQSAGITDVSHCTRPTIRILPQRGTLYYL,,SLALLPGWSTVVRPLTATSASRIQTIFLPQPPK* 273 amino acids = 30.7 kDa					

Feature	Location	Size			Type
✓ CLN5-201	1440 .. 10,310	8871 bp		→	CDS
▶ 4 segments = 1077 bp					
/note	= coding sequence ENSP00000366673				
/translation	= MAQEVDTAQGAEMRRGAGAARGRASWCWALALLWLAVVPGWSRVSGIPSRRHWPVPYK,,RFDFRPKPDPYCQAKYTFCPTGSPIPVMEGDD DIEVFRLQAPVWEFKYGDLLGHL,,KIMHDAIGFRSTLTGKNYTMEWYELFQLGNCTFPHLRPEMDAPFWCNQGAACFFEGIDDVHWKENGTLV QVATIS,,GNMFNQMAKWWKQDNETGIYYETWNVKASPEKGAETWFDSYDCSKFVLRFTFNKLAEFGAEFKNIETNYTRIFLYSGEPTYLGNETS FGPTGNKTLGLAIKRFYYPFKPHLPTKEFLLSLLQIFDAVIVHKQFYLFYNFYWFPLMKFPFIKITYEEIPLIRNKTLISGL*				
	358 amino acids = 41.5 kDa				
CLN5-208	1440 .. 10,310	8871 bp		→	CDS
▶ 4 segments = 1077 bp					
/note	= coding sequence ENSP00000490181				
/translation	= MAQEVDTAQGAEMRRGAGAARGRASWCWALALLWLAVVPGWSRVSGIPSRRHWPVPYK,,RFDFRPKPDPYCQAKYTFCPTGSPIPVMEGDD DIEVFRLQAPVWEFKYGDLLGHL,,KIMHDAIGFRSTLTGKNYTMEWYELFQLGNCTFPHLRPEMDAPFWCNQGAACFFEGIDDVHWKENGTLV QVATIS,,GNMFNQMAKWWKQDNETGIYYETWNVKASPEKGAETWFDSYDCSKFVLRFTFNKLAEFGAEFKNIETNYTRIFLYSGEPTYLGNETS FGPTGNKTLGLAIKRFYYPFKPHLPTKEFLLSLLQIFDAVIVHKQFYLFYNFYWFPLMKFPFIKITYEEIPLIRNKTLISGL*				
	358 amino acids = 41.5 kDa				
CLN5-203	1440 .. 9329	7890 bp		→	CDS
▶ 4 segments = 624 bp					
/note	= coding sequence ENSP00000479547				
/translation	= MAQEVDTAQGAEMRRGAGAARGRASWCWALALLWLAVVPGWSRVSGIPSRRHWPVPYK,,RFDFRPKPDPYCQAKYTFCPTGSPIPVMEGDD DIEVFRLQAPVWEFKYGDLLGHL,,KIMHDAIGFRSTLTGKNYTMEWYELFQLGNCTFPHLRPEMDAPFWCNQGAACFFEGIDDVHWKENGTLV QVATIS,,GNMFNQMAKWWKQDNETGIYYETWNVKASPEKGAETWFDSYDCSKFVLRFTFNKLAEFGAEFKNIETNYTRIFLYSGEPTYLGNETS FGPTGNKTLGLAIKRFYYPFKPHLPTKEFLLSLLQIFDAVIVHKQFYLFYNFYWFPLMKFPFIKITYEEIPLIRNKTLISGL*				
	297 amino acids = 32.4 kDa				
CLN5-216	1440 .. 7412	5973 bp		→	CDS
▶ 4 segments = 594 bp					
/note	= coding sequence ENSP00000489809				
/translation	= MAQEVDTAQGAEMRRGAGAARGRASWCWALALLWLAVVPGWSRVSGIPSRRHWPVPYK,,RFDFRPKPDPYCQAKYTFCPTGSPIPVMEGDD DIEVFRLQAPVWEFKYGDLLGHL,,KIMHDAIGFRSTLTGKNYTMEWYELFQLGNCTFPHLRPEMDAPFWCNQGAACFFEGIDDVHWKENGTLV QVATIS,,GNMFNQMAKWWKQDNETGIYYETWNVKASPEKGAETWFDSYDCSKFVLRFTFNKLAEFGAEFKNIETNYTRIFLYSGEPTYLGNETS FGPTGNKTLGLAIKRFYYPFKPHLPTKEFLLSLLQIFDAVIVHKQFYLFYNFYWFPLMKFPFIKITYEEIPLIRNKTLISGL*				
	297 amino acids = 32.4 kDa				
CLN5-219	1440 .. 7412	5973 bp		→	CDS
▶ 4 segments = 594 bp					
/note	= coding sequence ENSP00000489711				
/translation	= MAQEVDTAQGAEMRRGAGAARGRASWCWALALLWLAVVPGWSRVSGIPSRRHWPVPYK,,RFDFRPKPDPYCQAKYTFCPTGSPIPVMEGDD DIEVFRLQAPVWEFKYGDLLGHL,,KIMHDAIGFRSTLTGKNYTMEWYELFQLGNCTFPHLRPEMDAPFWCNQGAACFFEGIDDVHWKENGTLV QVATIS,,GNMFNQMAKWWKQDNETGIYYETWNVKASPEKGAETWFDSYDCSKFVLRFTFNKLAEFGAEFKNIETNYTRIFLYSGEPTYLGNETS FGPTGNKTLGLAIKRFYYPFKPHLPTKEFLLSLLQIFDAVIVHKQFYLFYNFYWFPLMKFPFIKITYEEIPLIRNKTLISGL*				
	297 amino acids = 32.4 kDa				
CLN5-202	1440 .. 5479	4040 bp		→	CDS
▶ 3 segments = 576 bp					
/note	= coding sequence ENSP00000482959				
/translation	= MAQEVDTAQGAEMRRGAGAARGRASWCWALALLWLAVVPGWSRVSGIPSRRHWPVPYK,,RFDFRPKPDPYCQAKYTFCPTGSPIPVMEGDD DIEVFRLQAPVWEFKYGDLLGHL,,KIMHDAIGFRSTLTGKNYTMEWYELFQLGNCTFPHLRPEMDAPFWCNQGAACFFEGIDDVHWKENGTLV QVATIS,,GNMFNQMAKWWKQDNETGIYYETWNVKASPEKGAETWFDSYDCSKFVLRFTFNKLAEFGAEFKNIETNYTRIFLYSGEPTYLGNETS FGPTGNKTLGLAIKRFYYPFKPHLPTKEFLLSLLQIFDAVIVHKQFYLFYNFYWFPLMKFPFIKITYEEIPLIRNKTLISGL*				
	297 amino acids = 32.4 kDa				
✓ Donor Template SNV -> REV	1484 .. 1583	100 bp		⇌	misc_feature
CLN5-206	1501 .. 11,752	10,252 bp		→	prim_transcript
/note	= primary transcript ENST00000635915 Nonsense mediated decay				
✓ Protospacer Sequence	1502 .. 1521	20 bp		⇌	misc_feature
✓ SNV	1517 .. 1517	1 bp		⇌	misc_feature
/note	= SNV = A REV = G				
✓ PAM	1522 .. 1524	3 bp		⇌	misc_feature
CLN5-209	1698 .. 4208	2511 bp		→	prim_transcript
/note	= primary transcript ENST00000636405				
CLN5-213	1726 .. 10,672	8947 bp		→	prim_transcript
/note	= primary transcript ENST00000636681 Nonsense mediated decay				
CLN5-214	1914 .. 11,805	9892 bp		→	prim_transcript
/note	= primary transcript ENST00000636705				

Feature	Location	Size			Type
CLN5-214	1914 .. 10,310	8397 bp		→	CDS
▶ 4 segments = 913 bp					
/note	= coding sequence ENSP00000490937				
/translation	= WVQ,,AL*LPSKT*SLLSS*VYFLSNWLTYPYGG***H*SFSITSPSMGI*IWRPPGTL,,ENYA*CHWIQKYINWQELHNGMV*TFPTWQLYISP SPT*NGCPFLV*SRRCLLF*GN**CSLEGKWDISSSSNYIR,,KHVQPNGKVGETGQ*NRNLL*DMECKSQPRKGGDMV*FLRLFQICVKDL*Q VG*IWSRVQEHRNQLYKNISLQWRTYLSGK*NICFWANRQDSWFSHKILLPLQTTFAN*RISVESLANF*CSDCAQTVLFVL*F*ILVFTYEIP 504 codons (27 internal stop codons)				
FBXL3	1939 .. 36,536	34,598 bp		←	gene
/note	= gene ENSG00000005812 Protein coding				
FBXL3-206	1939 .. 24,922	22,984 bp		←	prim_transcript
/note	= primary transcript ENST00000485797				
CLN5-210	3392 .. 9280	5889 bp		→	prim_transcript
/note	= primary transcript ENST00000636520 Retained intron				
CLN5-212	4570 .. 5618	1049 bp		→	prim_transcript
/note	= primary transcript ENST00000636602 Retained intron				
CLN5-217	4578 .. 11,770	7193 bp		→	prim_transcript
/note	= primary transcript ENST00000637278 Retained intron				
	5256 ..138,930	133,675 bp		→	prim_transcript
/note	= primary transcript ENST00000637192 Nonsense mediated decay				
	5295 .. 85,539	80,245 bp		→	prim_transcript
/note	= primary transcript ENST00000635838 Protein coding				
	5300 ..109,741	104,442 bp		→	prim_transcript
/note	= primary transcript ENST00000638101 Protein coding				
FBXL3-205	8478 .. 28,027	19,550 bp		←	prim_transcript
/note	= primary transcript ENST00000477982				
CLN5-204	9123 .. 9724	602 bp		→	prim_transcript
/note	= primary transcript ENST00000635761				
FBXL3-201	14,601 .. 36,500	21,900 bp		←	prim_transcript
/note	= primary transcript ENST00000355619 Protein coding				
FBXL3-202	16,906 .. 36,536	19,631 bp		←	prim_transcript
/note	= primary transcript ENST00000417323 Protein coding				
	17,943 .. 86,519	68,577 bp		→	prim_transcript
/note	= primary transcript ENST00000461131 Retained intron				
FBXL3-203	24,506 .. 28,085	3580 bp		←	prim_transcript
/note	= primary transcript ENST00000470210				
FBXL3-204	24,852 .. 36,426	11,575 bp		←	prim_transcript
/note	= primary transcript ENST00000472949				

Primer	Length		Binding Sites		Tm	Date Added
✓ PCR Forward	20-mer		1228 .. 1247		56°C	Oct 16, 2022
/sequence = GACCAAAGCACCTTCCTGGA 55% GC / 6071.0 Da						
✓ Sanger Sequencing	20-mer		1228 .. 1247		56°C	Oct 16, 2022
/sequence = GACCAAAGCACCTTCCTGGA 55% GC / 6071.0 Da						
✓ Donor Template SNV -> REV	100-mer		1484 .. 1583		90°C	Oct 13, 2022
/sequence = GGGGATGCCCGAGACCCGGGACCAAGCCCGGAACCAACCGCGAGCCAAAGCAGCGCCAGGGCCCCAGCACCAAGGAAGCGCGTCCCCGA GGGATGCCCGAGACCCGGGACCAAGCCCGGAACCAACCGCGAGCCAAAGCAGCGCCAGGGCCCCAGCACCAAGGAAGCGCGTCCCCGA						
✓ gRNA Protospacer	20-mer		1502 .. 1516		59°C	Oct 16, 2022
/sequence = GGGACGCGCTTCCTGATGCT 65% GC / 6125.0 Da						
✓ PCR Reverse	19-mer		1654 .. 1672		58°C	Oct 16, 2022
/sequence = CCCATCCCCCATCGTCAAC 63% GC / 5613.7 Da						