

**Start** (0)

**EcoRI**

5' GCCAGAATTCATGGGTTGTATCAAGTTATCTCCGTTTTCTTGGCTGCTGTTGCT 55  
3' CGGTCTTAAGTACCCAACATAGTTCCAATAGAGGCCAAAAGAACCGACGACAACGA

1 5 10 15  
M G C I K V I S V F L A A V A  
SP-PRO\_NHSSP\_C-deletion >

1 5 10 15  
M G C I K V I S V F L A A V A  
Secretion Peptide native >

GCTGTTGACGCTAGAGCTTTTTTCCACAACAAGGGTGGTAACGACATCATCCCAA 110  
CGACAACCTGCGATCTCGAAAAAAGGTGTTGTTCCACCATTGCTGTAGTAGGGTT

20 25 30  
A V D A R A F F H N K G G N D I I P  
SP-PRO\_NHSSP\_C-deletion >

A V D A R A F F H N K G G N D I I P  
(in frame with Secretion Peptide native) >

Secretion Peptide native

Propeptide >

ACTCCTACATCGTTGTTATGAAGGACGGTATCTCCACTCAAGAGTTCGAGTCCCA 165  
TGAGGATGTAGCAACAATACTTCTGCCATAGAGGTGAGTTCTCAAGCTCAGGGT

35 40 45 50  
N S Y I V V M K D G I S T Q E F E S H  
SP-PRO\_NHSSP\_C-deletion >

N S Y I V V M K D G I S T Q E F E S H  
(in frame with Secretion Peptide native) >

Propeptide >

**BstXI**

CATTTCTTCCGTTTTCTGCTACTCACGCTAAGAGATCCACTGAGTTGGTTGGTCAC 220  
GTAAAGAAGGCCAAAGACGATGAGTGCGATTCTCTAGGTGACTCAACCAACCAGTG

55 60 65 70  
I S S V S A T H A K R S T E L V G H  
SP-PRO\_NHSSP\_C-deletion >

I S S V S A T H A K R S T E L V G H  
(in frame with Secretion Peptide native) >

Propeptide >

AAGGATTCCTTCAACATCAACGGTTGGAGAGCTTACAACGGTCACTTCGATGCTG  
 TTCCTAAGGAAGTTGTAGTTGCCAACCTCTCGAATGTTGCCAGTGAAGCTACGAC 275

75 80 85  
 K D S F N I N G W R A Y N G H F D A  
 SP-PRO\_NHSSP\_C-deletion >

K D S F N I N G W R A Y N G H F D A  
 (in frame with Secretion Peptide native) ----->

Propeptide >

**AclI**

CTACTTTGGAGTCCATTTTGAACGACGACAACGTTAAGTACGTTGAGCACGACAG  
 GATGAAACCTCAGGTAAAACCTTGCTGCTGTTGCAATTCATGCAACTCGTGCTGTC 330

90 95 100 105  
 A T L E S I L N D D N V K Y V E H D R  
 SP-PRO\_NHSSP\_C-deletion >

A T L E S I L N D D N V K Y V E H D R  
 (in frame with Secretion Peptide native) ----->

Propeptide >

AGTTGTTAAGATCTCCGCTTTGACTACTCAGCCAAACGCTCCATCTTGGGGTTTG  
 TCAACAATTCTAGAGGCGAAACTGATGAGTCGGTTTGCGAGGTAGAACCCCAAAC 385

110 115 120 125  
 V V K I S A L T T Q P N A P S W G L  
 SP-PRO\_NHSSP\_C-deletion >

V V K I S A L T T Q P N A P S W G L  
 (in frame with Secretion Peptide native) ----->

Propeptide >

**BtsaI**

GGTAGAATTTCTCACAGATCCCCAGGTAACAAGGACTTCGTTTACGATGACACTG  
 CCATCTTAAAGAGTGTCTAGGGGTCCATTGTTCTGAAGCAAATGCTACTGTGAC 440

130 135 140  
 G R I S H R S P G N K D F V Y D D T  
 SP-PRO\_NHSSP\_C-deletion >

G R I S H R S P G N K D F V Y D D T  
 (in frame with Secretion Peptide native) ----->

Propeptide >

CTGGTCAGGGTATCACTATCTACGGTGTGACACTGGAATCGACATCAACCACCC  
 GACCAGTCCCATAGTGATAGATGCCACAACCTGTGACCTTAGCTGTAGTTGGTGGG 495

145 150 155 160  
 A G Q G I T I Y G V D T G I D I N H P  
 SP-PRO\_NHSSP\_C-deletion >

A G Q G I T I Y G V D T G I D I N H P  
 (in frame with Secretion Peptide native) ----->

 Propeptide

AGATTTTGGTGGTAGAGCTAGATGGGGAAC TAACACTGTTGACAACGCTAACAAC 550  
 TCTAAAACCACCATCTCGATCTACCCCTTGATTGTGACAAC TTTGCGATTGTTG  
 165 170 175 180  
 D F G G R A R W G T N T V D N A N N  
**SP-PRO\_NHSSP\_C-deletion**  
 D F G G R A R W G T N T V D N A N N  
 (in frame with Secretion Peptide native)

GACGGTCATGGTCATGGTACTCATACTGCTGGTACTTTTCGCTGGTAACGCTTACG 605  
 CTGCCAGTACCAGTACCATGAGTATGACGACCATGAAAGCGACCATTGCGAATGC  
 185 190 195  
 D G H G H G T H T A G T F A G N A Y  
**SP-PRO\_NHSSP\_C-deletion**  
 D G H G H G T H T A G T F A G N A Y  
 (in frame with Secretion Peptide native)

**BsaWI**

GTATTGCTAAGAAGGCTTCCGTTGTTGCTGTTAAGGTTTTGTCTGCTTCTGGTTC 660  
 CATAACGATTCTTCCGAAGGCAACAACGACAATTCCAAAACAGACGAAGACCAAG  
 200 205 210 215  
 G I A K K A S V V A V K V L S A S G S  
**SP-PRO\_NHSSP\_C-deletion**  
 G I A K K A S V V A V K V L S A S G S  
 (in frame with Secretion Peptide native)

CGGTTCCAACGCTGGTGTATTATAAGGGTATCGACTGGTGTGTTACAGACGCTAGA 715  
 GCCAAGGTTGCGACCACAATAATTCCCATAGCTGACCACACAATGTCTGCGATCT  
 220 225 230 235  
 G S N A G V I K G I D W C V T D A R  
**SP-PRO\_NHSSP\_C-deletion**  
 G S N A G V I K G I D W C V T D A R  
 (in frame with Secretion Peptide native)

TCTAAGGGTGCTTTGGGTAAGGCTGCTTTGAACTTGTCTTTGGGTGGTGGTTTCA 770  
 AGATTCCCACGAAACCCATTCCGACGAAACTTGAACAGAAACCCACCACCAAAGT  
 240 245 250  
 S K G A L G K A A L N L S L G G G F  
**SP-PRO\_NHSSP\_C-deletion**  
 S K G A L G K A A L N L S L G G G F  
 (in frame with Secretion Peptide native)

**Eco53kI**      **SacI**  
**BanII**

ACCAGGCTACAAACGACGCTGTTACTAGAGCTCAGACTGCTGGAATCTTCGTTGC  
 TGGTCCGATGTTTGCTGCGACAATGATCTCGAGTCTGACGACCTTAGAAGCAACG

825

N    255                      260                      265                      270  
 N    Q    A    T    N    D    A    V    T    R    A    Q    T    A    G    I    F    V    A

SP-PRO\_NHSSP\_C-deletion

N    Q    A    T    N    D    A    V    T    R    A    Q    T    A    G    I    F    V    A  
 ----- (in frame with Secretion Peptide native) ----->

**AlwNI**

TGTTGCTGCTGGTAACGATAACAAGGACGCTAGAACTACTCTCCAGCTTCTGCT  
 ACAACGACGACCATTGCTATTGTTCTGCGATCTTTGATGAGAGGTCTGAAGACGA

880

                    275                      280                      285                      290  
 V    A    A    G    N    D    N    K    D    A    R    N    Y    S    P    A    S    A

SP-PRO\_NHSSP\_C-deletion

V    A    A    G    N    D    N    K    D    A    R    N    Y    S    P    A    S    A  
 ----- (in frame with Secretion Peptide native) ----->

**PvuII**                      **TatI**                                      **AhdI**  
**MspA1I**

CCAGCTGTTTGTACTGTTGCTTCCCTCACTATCGACGACCAAAGTCCTCTTTCT  
 GGTGACAAACATGACAACGAAGGAGGTGATAGCTGCTGGTTTTTCAGGAGAAAGA

935

                    295                      300                      305  
 P    A    V    C    T    V    A    S    S    T    I    D    D    Q    K    S    S    F

SP-PRO\_NHSSP\_C-deletion

P    A    V    C    T    V    A    S    S    T    I    D    D    Q    K    S    S    F  
 ----- (in frame with Secretion Peptide native) ----->

**BmrI**

CTAACTGGGGTTCCATCGTTGACATCTACGCTCCAGGTTCCAACATTATTTCCGA  
 GATTGACCCCAAGGTAGCAACTGTAGATGCGAGGTCCAAGGTTGTAATAAAGGCT

990

                    310                      315                      320                      325  
 S    N    W    G    S    I    V    D    I    Y    A    P    G    S    N    I    I    S    D

SP-PRO\_NHSSP\_C-deletion

S    N    W    G    S    I    V    D    I    Y    A    P    G    S    N    I    I    S    D  
 ----- (in frame with Secretion Peptide native) ----->

**AfIII**

TGCTCCAGGTGGTGGTGTAGAACTATGTCTGGTACTTCTATGGCTTCCCCACAC  
 ACGAGGTCCACCACCACAATCTTGATACAGACCATGAAGATAACCGAAGGGGTGTG

1045

                    330                      335                      340                      345  
 A    P    G    G    G    V    R    T    M    S    G    T    S    M    A    S    P    H

SP-PRO\_NHSSP\_C-deletion

A    P    G    G    G    V    R    T    M    S    G    T    S    M    A    S    P    H  
 ----- (in frame with Secretion Peptide native) ----->

**AleI**

GTTTGTGGTGCTGGTGCTGCTATGTTGGCTCAAGGTGTTCCAGTTGGTCAGGTTT  
 CAAACACCACGACCACGACGATACAACCGAGTTCACAAGGTCAACCAGTCCAAA

1100

350 355 360  
 V C G A G A A M L A Q G V P V G Q V  
**SP-PRO\_NHSSP\_C-deletion**  
 V C G A G A A M L A Q G V P V G Q V  
 ----- (in frame with Secretion Peptide native) ----->

GTGACAGATTGAAGCAGATCGGTAACGCTGTTGTTAGAAACCCAGGTA CTTCCAC  
 CACTGTCTAACTTCGTCTAGCCATTGCGACAACAATCTTTGGGTCCATGAAGGTG

1155

365 370 375 380  
 C D R L K Q I G N A V R N P G T S T  
**SP-PRO\_NHSSP\_C-deletion**  
 C D R L K Q I G N A V V R N P G T S T  
 ----- (in frame with Secretion Peptide native) ----->

**BanI**  
**Acc65I** **KpnI** **End** (1199)

TACAAACAGATTGTTGTATAACGGTTCCTAATGAGGTACCCGGC 3'  
 ATGTTTGTCTAACAACATATTGCCAAGGATTACTCCATGGGCCG 5' 1199

385 390  
 T N R L L Y N G S \* \*  
**SP-PRO\_NHSSP\_C-deletion**  
 T N R L L Y N G S \*  
 -- (in frame with Secretion Peptide native) -->