

A

TP0856

Hatch domain 50 100 150

SS146 MVHYKSVFYKSAALVCGFVLAGASVAIASSEAAAKTRSKMSEFKRRAVSSPSGGRLSVLDGSFTALANDASFFEANPAGSANMTHSELTFAHTVGFNNSHAETLSYVQSGNWXGASMRMFFPESGFNFPSTGPVCTPASNPIKLLGG
 SS167 MVHYKSVFYKSAALVCGFVLAGASVAIASSEAAAKTRSKMSEFKRRAVSSPSGGRLSVLDGSFTALANDASFFEANPAGSANMTHSELTFAHTVGFNNSHAETLSYVQSGNWXGASMRMFFPESGFNFPSTGPVCTPASNPIKLLGG
 Nichols MVHYKSVFYKSAALVCGFVLAGASVAIASSEAAAKTRSKMSEFKRRAVSSPSGGRLSVLDGSFTALANDASFFEANPAGSANMTHSELTFAHTVGFNNSHAETLSYVQSGNWXGASMRMFFPESGFNFPSTGPVCTPASNPIKLLGG

Signal sequence 200 250 300

SS146 LGIVNFSRRFGGLSIGANLKAGFRDAQGLTHLSLGTDVGLQWVGNVAKFFSSAEPNMYVGLSATNLGFTVKLPGSPFVLCRATGEQCKTCGRCTGVGTCNGEKPCCKDCCDCNCPQDEATPGSPHATDTMLRAGFAYRPLSWFLFSV
 SS167 LGIVNFSRRFGGLSIGANLKAGFRDAQGLTHLSLGTDVGLQWVGNVAKFFSSAEPNMYVGLSATNLGFTVKLPGSPFVLCRATGEQCKTCGRCTGVGTCNGEKPCCKDCCDCNCPQDEATPGSPHATDTMLRAGFAYRPLSWFLFSV
 Nichols LGIVNFSRRFGGLSIGANLKAGFRDAQGLTHLSLGTDVGLQWVGNVAKFFSSAEPNMYVGLSATNLGFTVKLPGSPFVLCRATGEQCKTCGRCTGVGTCNGEKPCCKDCCDCNCPQDEATPGSPHATDTMLRAGFAYRPLSWFLFSV

ECL3 ECL4

SS146 GVATRVNNSLQVDHLWKRSSVALGMLDPVRFLLTLLSGVAVNANGKVRAGVGAIEIRVACFQVSASYRYDSTGDEOQGTPHNMSLGAISILLGRK*
 SS167 GVATRVNNSLQVDHLWKRSSVALGMLDPVRFLLTLLSGVAVNANGKVRAGVGAIEIRVACFQVSASYRYDSTGDEOQGTPHNMSLGAISILLGRK*
 Nichols GVATRVNNSLQVDHLWKRSSVALGMLDPVRFLLTLLSGVAVNANGKVRAGVGAIEIRVACFQVSASYRYDSTGDEOQGTPHNMSLGAISILLGRK*

ECL5 ECL6 ECL7

B

TP0858

Hatch domain 50 100 150

SS146 MLRLPTARACITMGTMIRHTFTHRCGALLCALALGSSDMAATAAAKPKKGOMQLRQRPWAPTGGRYASLDGAF TALANDASFFEANPAGSANMTHGELAFFHTTGFGSFHAETLSYVQSGNWXGASMRMFFPESGFDFSTTTEPVC
 SS167 MLRLPTARACITMGTMIRHTFTHRCGALLCALALGSSDMAATAAAKPKKGOMQLRQRPWAPTGGRYASLDGAF TALANDASFFEANPAGSANMTHGELAFFHTTGFGSFHAETLSYVQSGNWXGASMRMFFPESGFDFSTTTEPVC
 Nichols MLRLPTARACITMGTMIRHTFTHRCGALLCALALGSSDMAATAAAKPKKGOMQLRQRPWAPTGGRYASLDGAF TALANDASFFEANPAGSANMTHGELAFFHTTGFGSFHAETLSYVQSGNWXGASMRMFFPESGFDFSTTTEPVC

Signal sequence 200 250 300

SS146 TPASNP IKORGAIGIINFARRIGGLSLGANLKAGFRDAQLOHTSVSSDIGLOWGNVAKSFTSEEPNLYIGLAATNLGLTVKVSDEIENCTSTCEKCGCKERCCKGKACCKDCCDCNCPQDCNDKGTVHATDTMLRAGFAYRPFWS
 SS167 TPASNP IKORGAIGIINFARRIGGLSLGANLKAGFRDAQLOHTSVSSDIGLOWGNVAKSFTSEEPNLYIGLAATNLGLTVKVSDEIENCTSTCEKCGCKERCCKGKACCKDCCDCNCPQDCNDKGTVHATDTMLRAGFAYRPFWS
 Nichols TPASNP IKORGAIGIINFARRIGGLSLGANLKAGFRDAQLOHTSVSSDIGLOWGNVAKSFTSEEPNLYIGLAATNLGLTVKVSDEIENCTSTCEKCGCKERCCKGKACCKDCCDCNCPQDCNDKGTVHATDTMLRAGFAYRPFWS

ECL2 ECL3 ECL4

SS146 FLFSLGATSMNVQTLASSDAKSLYQNLAYSIGAMDFPFSFLSLSSSFRINHKANMRVGVGAEARIARIKLNAGYRCDVDSISGSGCTGAKASHYLSLGGAILLGRN*
 SS167 FLFSLGATSMNVQTLASSDAKSLYQNLAYSIGAMDFPFSFLSLSSSFRINHKANMRVGVGAEARIARIKLNAGYRCDVDSISGSGCTGAKASHYLSLGGAILLGRN*
 Nichols FLFSLGATSMNVQTLASSDAKSLYQNLAYSIGAMDFPFSFLSLSSSFRINHKANMRVGVGAEARIARIKLNAGYRCDVDSISGSGCTGAKASHYLSLGGAILLGRN*

ECL5 ECL6 ECL7

C

Signal peptide Hatch

TP0856 1 MVHYKSVFYKSAALVCGFVLAGASVAIASSEAAAKTRSKMSEFKR 46
 TP0858 1 MLRLPTARACITMGTMIRHTFTHRCGALLCALALG--SSTMAATAAAKPKKGOMQLROR 58

β1 → ECL1 β2

TP0856 47 AVSSPSGGRSLSVLDGSFTALANDASFFEANPAGSANMTHSELTFAHTVGFNNSHAETLSY 106
 TP0858 59 PVWAPTGGRYASLDGAF TALANDASFFEANPAGSANMTHGELAFFHTTGFGSFHAETLSY 118

β3 → ECL2 β4

TP0856 107 VQSGNWXGASMRMFFPESGFNFPSTGPVCTPASNPIKLLGGLGIVNFSRRFGGLSIG 166
 TP0858 119 VQSGNWXGASMRMFFPESGFDFSTTEPVCPTASNP IKORGAIGIINFARRIGGLSLG 178

β5 → ECL3 β6 → β7

TP0856 167 ANLKAGFRDAQGLTHLSLGTDVGLQWVGNVAKFFSSAEPNMYVGLSATNLGFTVKLPGSP 226
 TP0858 179 ANLKAGFRDAQLOHTSVSSDIGLOWGNVAKSFTSEEPNLYIGLAATNLGLTVKVS-DK 237

ECL4 β8

TP0856 227 FVLCRATGEQCKTCGRCTGVGTCNGEKPCCKDCCDCNCPQDEATPGSPHATDTMLRA 286
 TP0858 238 IENCTSTCEKCG-CCKERC-----CCNGKACCKDCCDCNCPQDCNDKGTVHATDTMLRA 291

β9 → ECL5 β10 → β11

TP0856 287 GFAYRPLSWFLFSVGVATRVNNSLQ---VDHLWKRSSVALGMLDPVRFLLTLLSGVAVN 343
 TP0858 292 GFAYRPLSWFLSLGATSMNVQTLASSDAKSLYQNLAYSIGAMDFPFSFLSLSSSFRIN 351

ECL6 β12 → β13 → ECL7 β14

TP0856 344 ANGKVRAGVGAIEIRVACFQVSASYRYDS-----TGDEOQGTPHNMSLGAISILLGRK* 395
 TP0858 352 HKANMRVGVGAEARIARIKLNAGYRCDVDSISGSGCTGAKASHYLSLGGAILLGRN* 409