

MC58 MRSSFRLKPICFYLMGVTLYHYSYAEDAGRAGSEAQIQVLEDVHVKAKRVPKDKKVFTDARAVSTR
H44/76
O53442M..H.....
Z2491M..H.....
FAM18M..H.....
8013M..H.....T.....
ALPHA14M..H.....
ALPHA153M..H.....
ALPHA170M..H.....
ATCC-13091M..H.....
MO1-240355M..H.....
G2136M..H.....
N1568M..H.....
MO1-240013M..H.....T.....

MC58 QDIFKSSSENLDNIVRSIPGAFTQQDKSSGIVSLNIRGDSGFGFRVNTMVDGITQTFYSTSTDAGRAG
H44/76
O53442
Z2491
FAM18
8013
ALPHA14
ALPHA153
ALPHA170
ATCC-13091
MO1-240355
G2136
N1568
MO1-240013

MC58 GSSQFGASVDSNFIAGLDVVKGSFSGSAGINSLAGSANLRTLGVDDVVQGNNTYGLLLKGLTGTNS
H44/76
O53442
Z2491
FAM18
8013
ALPHA14
ALPHA153
ALPHA170
ATCC-13091
MO1-240355
G2136
N1568
MO1-240013

MC58 TKGNAAMAAIGARKWLESGASVGVLYGHSRRSVAQNYRVGGGGQHIGNFGAEYLERRKQRYFVQEGA
H44/76
O53442
Z2491E...G
FAM18Q...T.G
8013Q...T.G
ALPHA14Q...T.G
ALPHA153D.Q
ALPHA170D.Q
ATCC-13091
MO1-240355G
G2136
N1568
MO1-240013T.G

MC58 LKFNSDSGKWERDLQRQQWKYPYKNYNN-QELQKYIEEHDKSWRENLAPQYDITPIDPSSLKQQS
H44/76
O53442P.....K.....
Z2491N.....F.KSY.KT.W..QK.DAP.....G.....
FAM18N.....F..TSY..Q.KDP.K.K....DQ..D.....
8013N.....F..TSY..Q.KDP.K.K....DQ..D.....
ALPHA14N.....F..TSY..Q.KDP.K.K....DQ..D.....
ALPHA153PW..K.E.P.....
ALPHA170PW..K.E.P.....
ATCC-13091SW..K.E.P.....
MO1-240355N.....F..PY.....W.QK..DP.....G.....
G2136
N1568P..K....N..K.....
MO1-240013F..F..H.L..K.DDP.....GQ..D.....

MC58 AGNLFKLEYDGVFNKYTAQFRDLNNTKIGSRKIINRNYQFNYGSLNPNYTNLNLTAAYNSGRQKYPK
H44/76
O53442S.A.....
Z2491
FAM18S.....
8013S.A.....
ALPHA14
ALPHA153S.A.....
ALPHA170S.A.....
ATCC-13091S.A.....
MO1-240355
G2136S.A.....
N1568S.A.....
MO1-240013

MC58 GSKFTGWGLLKDFETYNNAKILDLNNTATFRLPRETELQTTLGFNYFHNEYGKNRFPEELGLFFDG
H44/76
O53442
Z2491S.....
FAM18
8013
ALPHA14
ALPHA153
ALPHA170
ATCC-13091
MO1-240355
G2136
N1568
MO1-240013

MC58 PDQDNGLYSYLGRFKGDKLLPQKSTIVQPAGSQYFNTFYFDAALKKDIYRLNYSTNTVGYRFGGGE
H44/76
O53442
Z2491
FAM18
8013
ALPHA14
ALPHA153
ALPHA170
ATCC-13091
MO1-240355
G2136
N1568
MO1-240013

MC58 YTGYYGSDDEFKRAFGENSPYKXHCNRS~~CGI~~YEPVLKKYGKKRANNHSVSIADFGDYFMPFASY
H44/76
O53442S.EG.....
Z2491Q.....
FAM18S.EG.....P.L.....
8013Q.....
ALPHA14EG.....I.RE.DP.L.....
ALPHA153S.EG.....P.L.....
ALPHA170RE.....Q.....
ATCC-13091S.EG.....RE.....P.L.....
MO1-240355S.EG.....RE.....P.L.....
G2136P.L.....G.
N1568P.L.....
MO1-240013

MC58 SRTHRMPNIQEMYFSQIGDSGVHTALKPERANTWQFGFNTYKKGLLKQDDTLGLKLVGYRSRIDNY
H44/76
O53442
Z2491I.....
FAM18
8013I.....
ALPHA14
ALPHA153
ALPHA170
ATCC-13091
MO1-240355
G2136
N1568
MO1-240013

MC58 IHNVYKWWDLNGDIPSWVSSTGLAYTIQHRNFKDKVHKHGFLELNYDYGRFFTNLSYAYQKSTQ
H44/76
O53442N.....N.....
Z2491N.....
FAM18
8013N.....
ALPHA14N.....
ALPHA153
ALPHA170N.....
ATCC-13091
MO1-240355
G2136N.....
N1568N.....
MO1-240013

MC58 PTNFSDAESPNNASKEDQLKQGYGLSRVVALPRDYGRLEVGT~~R~~WLG~~N~~KLTLGGAMRYFGKSI~~R~~AT
H44/76
O53442
Z2491
FAM18
8013
ALPHA14
ALPHA153
ALPHA170
ATCC-13091
MO1-240355
G2136
N1568
MO1-240013

MC58 AEERYIDGTNGGNTSNFRQLGKRSIKQTETLARQPLIFDFYAAAYEPKKNLIFRAEVKNLFDRRYID
 H44/76
 O53442V.....
 Z2491
 FAM18
 8013
 ALPHA14V.....
 ALPHA153V.....
 ALPHA170V.....
 ATCC-13091V.....
 MO1-240355V.....
 G2136
 N1568RDV.....
 MO1-240013

MC58 PLDAGNDAATQRYSSFDPKDKDEDVTCNADKTL**C**NGKYGGT**S**KS**V**LT**N**FARG**R**T**F**LM**T**MSY**K**
 H44/76
 O53442E.....
 Z2491E...D.N...I.....
 FAM18-G.....
 8013
 ALPHA14E...D.N...I.....
 ALPHA153
 ALPHA170-G...I.....
 ATCC-13091E...D.N...I.....
 MO1-240355E.....
 G2136-G.....
 N1568E...D.-G...I.....
 MO1-240013-G...I.....