

Numbering starts at amino acid 78 and is off by 8 amino acids because of an 8aa insertion that is not accounted for. Serines that have been changed to alanines in the mutants are shown in red.

78

MAMGDDKSFDDDEESVDGNRPSSAASAFKVPAPKTSGNPANSARKPGSAGGP
KVGGASKEGGAGAVDEDDFIKAFTDVPSIQIYSSRELEETLNKIREILSDDKHDW
DQRANALKKIRSLVAGAAQYDCFFQHRLRLLDGALKLSAKDLRSQVVREACITV
AHLSTVLGNKFDHGAEIVPTLFLNLPNSAKVMATSGCAAIRFIIRHHTHVPRLIPLI
TSNCTSKSVPVRRRSFEFLDLLLQEWQTHSLERHAAVLVETIKKGIHDADAEAR
VEARKTYMGLRNHFPGEAETLYNSLEPSYQKSLQTYLKSSGSVASLPQSDRSS
SSSQESLNRPFSSKWSTANPSTVAGRVSAGSSKASSLPGSLQRSRSDIDVNA
AGAKAHHAAGQSVRRGRLGAGALNAGSYASLEDTSDKLDGTASEDGRVRAKL
SAPLAGMGNAKADSRGRSRTKMVSQSQPGSRSGSPGRVLTALSTVSSGVQ
RVLVNSASAQKRSKIPRSQGC SREA SPSRLSVARSSRIPRPSV S QGC S REA S R
E S S R D T S P V R S F Q P L A S R H H S R S T G A L Y A P E V Y G A S G P G Y G I S Q S S R L S S S V S
AMRVLNTGSDVEEAVADALKKPARRRYESYGMHSDDDANS DASSAC SERSYS
SRNGSIPTYMRQTEDVAEVLNRCASSNWSERKEGLLGLQNLLKNQRTL SRVEL
KRLCEIFTRMFADPHGKRVFSMFLETLVDFIQVHKDDLQDWLFLVLLTQLLKKMG
ADLLGSVQAKVQKALDVTRESFPNDLQFNILMRFTVDQTQTPSLKVKVAILKYIE
TLAKQMDPGDFINSSETRLAVSRVITWTTEPKSSDVRKAAQSVLISL FELNTPEF
TMLLGALPKTFQDGATKLLHNHLRNTGNGTQSSMGSP LTRPTPRSPANWSSPL
TSPTNTSQNTLSPSAFDYDTENMNSEDIYSSLRGVTEAIQNF SFRSQEDMNEPL
KRDSKKDDGDSMCGGPGMSDPRAGGDATDSSQTALDNKASLLHSMPTHSSP
RSRDYNPYNYS SISP FNKSALKEAMFDDADQFPDDL SLDHSDLVAELLKELS
NHNERVEERKIALYELMKLTQEESFSVWDEHFKITLLLLLETLGDKEPTIRALALK
VLREILRHQPARFKNYAELTVMKTLEAHKDPHKEVVRS AEEAASVLATSISPEQ
CIKVLCP IIQTADYPINLAAIKMQTKVIERSKETLNLLLPEIMPGLIQGYDNSESSV
RKACVFCLVAVHAVIGDELKPHLSQLTGSKMKLLNLYIKRAQTGSGGADPTTDV
SGQS¹³⁷²