


**Query Protein: ASK1** IAHMVEDDCVDNGVPLPNVTSKILAKVIEYCKRHVEAAASKAEAVEGAA  
**Consense Residues** I M EDDC DNG+PLPNVTSKIL VIEYCK+HV VE  
**Prediction** IKGMAEDDCADNGIPLPNVTSKILLLVIEYCKKHV-----VE---  
**Target DNA: ASK6** aagaggggtggagaccagaaaacttgagttaacg gg  
tagtcaaagcaagtctcatcgattttttaagaaat ta  
agtgaacttcttacttacgacgacaggcgctcgcc tg

**Query Protein: ASK1** TSDDDLKAWDADFMT-IDQATLFELILAANYLNIKNLLDLTQTVDAMI  
**Consense Residues** ++DLK WDA+FMK +Q+ LF++++AANYLNI++LLDLTQTVD++  
**Prediction** SKEEDLKKWDAEFMKMEQSILFDVMMMAANYLNIQSLLDLTQTVDLL  
aagggcaatgggtaaaagctactggaaggatcaacaccgcatcagggtc  
**Target DNA: ASK6** gaaaataagacattaataactttatttccaatatagttatctactcatt  
caaatagggctacggggaagtctttgggtgttctcactttcatatcttgc

**Query Protein: ASK1** KGKTPEEIRTTFNINKNDFTPEEEEVRRRENQWAFE  
**Consense Residues** GKTP EIR+ FNI+NDFT E E E+R+ NQWAFE  
**Prediction** SGKTPGEIRSYFNIENDFTAEGEAEIRKVNQWAFE  
tgaacggactttaagagtaggggggacagactgtg  
**Target DNA: ASK6** cgaccgatgcataataatccagacatgataagcta  
acatacgtcacctcgctcaagaatgccggtagtta


**Frame Shift  
mutation**