

A

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MAP2K1 -MPKKKPT-P-IQLNP-APDGSVAVNGTSSAETNLEALQKKLEELDEQQQRKLEAFLTQ 56
MAP2K2 MLARRKPVLPALTINPTIAEGPSPTSEGASEANLVDLQKKLEELDLDEQQQRKLEAFLTQ 60
      .:.*:*. * : :** .:*.: .. .:.*:*** *****:*****

MAP2K1 KQKVGELKDDDFEKISELGAGNGGVVFKVSHKPSGLVMARKLIHLEIKPAIRNQIIRELQ 116
MAP2K2 KAKVGELKDDDFERISELGAGNGGVVTKARHRPSGLIMARKLIHLEIKPAVRNQIIRELQ 120
      * *****:***** * . *:***:*****:*****

MAP2K1 VLHECNPSYIVGFYGFYSDGEISICMEHMDGGSLDQVLKKGRIPEQILGKVSIAVIK 176
MAP2K2 VLHECNPSYIVGFYGFYSDGEISICMEHMDGGSLDQVLKKGRIPEQILGKVSIAVLRG 180
      *****:*****:*****:*****:*****

MAP2K1 LTYLREKHKIMHRDVKPSNILVNSRGEIKLCDFGVSGQLIDSMANSFVGTSTRYSMPERLQ 236
MAP2K2 LAYLREKHQIMHRDVKPSNILVNSRGEIKLCDFGVSGQLIDSMANSFVGTSTRYSMPERLQ 240
      *:*****:********** * ***** * * * * * *****

MAP2K1 GTHYSVQSDIWSMGLSLVEMAVGRYPISPPDAKELELLFG---CHVEGDAEETPPRPR 292
MAP2K2 GTHYSVQSDIWSMGLSLVELAIGRYPISPPDAKELEASFGRPVVDGADGEPHSVSPRPRP 300
      *****:*****:***** * . : * . . * * * * .

MAP2K1 PGRPLSS-YGMDSRPPMAIFELLDYIVNEPPPCLPSGVFSLEFQDFVNKCLIKNPAERAD 351
MAP2K2 PGRPI SVGHGMDSRPMAIFELLDYIVNEPPPCLPSGVFSDFQEFVNKCLIKNPAERAD 360
      ****: * : *****. ***** : **: *****

MAP2K1 LKQLMVHAFIKRSDAEVDFAGWLCSTIGLNQPSPTHAASI 393
MAP2K2 LKLLMNHAFIKRSEGEVDFAGWLCRTLRLKQPSPTPTTAV- 401
      ** * *****: . ***** * : *:*** * * : *

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B

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mouse MPKKKPTPIQLNPAPDGSVAVNGTSSAETNLEALQKKLEELDEQQQRKLEAFLTQKQKV 60
human MPKKKPTPIQLNPAPDGSVAVNGTSSAETNLEALQKKLEELDEQQQRKLEAFLTQKQKV 60
xenopus MPKKKPTPIQLNPNPEGTAVNGTPTAETNLEALQKKLEELDEQQQRKLEAFLTQKQKV 60
      ***** * : * : ***** . : *****

mouse GELKDDDFEKISELGAGNGGVVFKVSHKPSGLVMARKLIHLEIKPAIRNQIIRELQVLHE 120
human GELKDDDFEKISELGAGNGGVVFKVSHKPSGLVMARKLIHLEIKPAIRNQIIRELQVLHE 120
xenopus GELKDDDFEKVSELGAGNGGVVFKVSHKPTSLIMARKLIHLEIKPAIRNQIIRELQVLHE 120
      *****:*****:*****:***** . : * : *****

mouse CNSPYIVGFYGFYSDGEISICMEHMDGGSLDQVLKKGRIPEQILGKVSIAVIKGLTYL 180
human CNSPYIVGFYGFYSDGEISICMEHMDGGSLDQVLKKGRIPEQILGKVSIAVIKGLTYL 180
xenopus CNSPYIVGFYGFYSDGEISICMEHMDGGSLDQVLKKGRIPEKILGKVSIAVIKGLTYL 180
      *****:*****:*****:*****:*****

mouse REKHKIMHRDVKPSNILVNSRGEIKLCDFGVSGQLIDSMANSFVGTSTRYSMPERLQGTHY 240
human REKHKIMHRDVKPSNILVNSRGEIKLCDFGVSGQLIDSMANSFVGTSTRYSMPERLQGTHY 240
xenopus REKHKIMHRDVKPSNILVNSRGEIKLCDFGVSGQLIDSMANSFVGTSTRYSMPERLQGTHY 240
      ***** ***** * * * * * *****

mouse SVQSDIWSMGLSLVEMAVGRYPISPPDAKELELLFGCHVEGD--AAEETPPRPRTPGRPLS 298
human SVQSDIWSMGLSLVEMAVGRYPISPPDAKELELMFGCQVEGD--AAEETPPRPRTPGRPLS 298
xenopus SVQSDIWSMGLSLVEMAVGRYPISPPDAKELELIFGCSVEGDPASSELPAPRPRPGRPI 300
      *****:*****:*****:***** * : * * * * . : * . * * * * : *

mouse SYGMDSRPPMAIFELLDYIVNEPPPCLPSGVFSLEFQDFVNKCLIKNPAERADLKQLMVH 358
human SYGMDSRPPMAIFELLDYIVNEPPPCLPSGVFSLEFQDFVNKCLIKNPAERADLKQLMVH 358
xenopus SYGPD SRPPMAIFELLDYIVNEPPPCLPSGVFGAEFQDFVNKCLVKNPAERADLKQLMVH 360
      *** *****:***** . *****:*****

mouse AFIKRSDAEEVDFAGWLCSTIGLNQPSPTHAASI 393
human AFIKRSDAEEVDFAGWLCSTIGLNQPSPTHAAGV 393
xenopus SFIKQSELEEVDFAGWLCSTMGLKQPSPTHAAGV 395
      : * * : * : *****:*****:*****:***** . :

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