

Certificate of Analysis



p38-delta

Mitogen-activated protein kinase 13

Recombinant Human Active Protein Kinase

HGNC Symbol: MAPK13

Synonyms: p38d, SAPK4, PRKM13

Product No.: 0941-0000-1

Lot: 000

Description: Human p38-delta, full length, amino acids M₁-L₃₆₅ (as in NCBI/Protein entry NP_002745.1), activated, untagged, expressed in E.coli

Product identity: p38-delta Lot 001, was confirmed as p38-delta by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 42,430 Da

Expression: E.coli

Purification: GST-Affinity Chromatography

Activation: With MKK6 S207D/T211D

Storage buffer: 50 mM HEPES pH 7.5, 100 mM NaCl, 5 mM DTT, 20% glycerol

Storage temperature: -80°C

For complete recovery, mix well and spin before use. Product must not be stored in diluted solutions, aliquots below 10µl are not advisable. Avoid repeated freeze-thaw cycles!

Protein concentration: 0.468 µg/µl

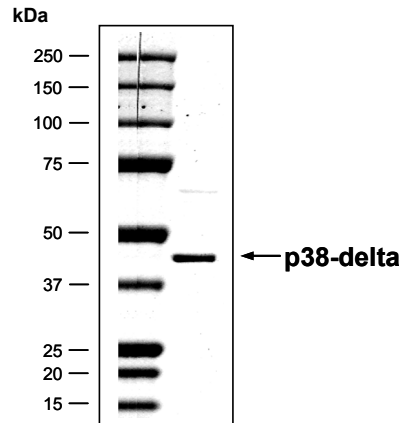
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

Specific kinase activity (P_i transfer): 481 pmol/µg×min

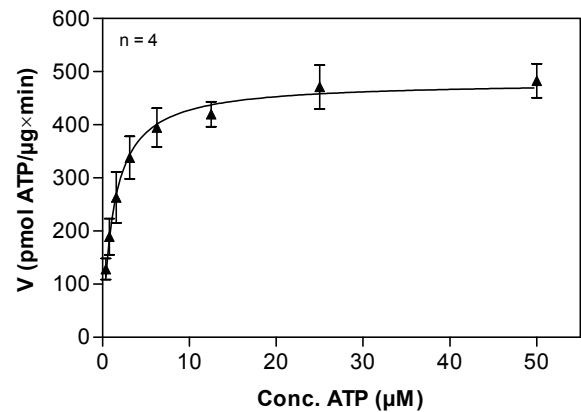
ATP-K_M: 1.3 µM

**p38-delta Lot 001:
Coomassie stain**



2.0 µg p38-delta

**p38-delta Lot 001:
Determination of V_{max} and K_M value for ATP**



Determination of K_M value & Specific activity:

- Assay conditions:
 - 60 mM HEPES-NaOH, pH 7.5
 - 3 mM MgCl₂
 - 3 mM MnCl₂
 - 3 µM Na-orthovanadate
 - 1.2 mM DTT
 - 50 µg / ml PEG_{20,000}
 - ATP (variable)
 - Substrate: rec. ATF2, 2 µg/ml
 - p38-delta: 100 ng/ml
- Filter binding assay
 - MSFC membrane (Millipore)

Additional assay technology: p38-delta Lot 001

was also successfully tested by ProQinase for the use with the ADP-Glo™ Kinase assay from Promega ADP-Glo assay conditions may vary from radiometric assay conditions, please inquire for assay details



p38-delta

Product No.: 0941-0000-1

p38-delta Recombinant Fusion Protein Amino Acid Sequence								
1	GPLGS	MSLIR	KKGFYKQDVN	KTAWELPKTY	VSPTHVGS	YGSVCSAIDK	RSGEKVAIKK	60
61	LSRPFQSEIF	AKRAYRELLL	LKHMQHENV	GLLDVFTPAS	SLRNFYDFYL	VMPFMQTDLQ		120
121	KIMGMEFSEE	KIQYLVYQML	KGLKYIHSAG	VVHRDLKPGN	LAVNEDCELK	ILDFGLARHA		180
181	DAEMTGYVVT	RWYRAPEVIL	SWMHYNQTV	IWSVGCIMAE	MLTGKTLFKG	KDYLDQLTQI		240
241	LKVTGVPGTE	FVQKLNKAA	KSYIQSLPQT	PRKDFTQLFP	RASPQAADLL	EKMLEDVVK		300
301	RLTAAQALTH	PFFEPFRDPE	EETEAQQPFD	DSLEHEKLT	DEWKQHIYKE	IVNFSPARK		360
361	DSRRRSGMKL							420

1-5: legacy from 3C cleavage **blue**: p38-delta

p38-delta wt ¹ Amino Acid Sequence								
1	MSLIR	KKGFY	KQDVNKTAW	ELPKTYVSP	THVGS	YGSVCSAID	KRSGEKVAI	60
61	QSEIFAKRAY	RELLLKHM	QHENVIGLL	DVFTPASSL	RNFYDFYLV	MPFMQTDL	QKIMGM	120
121	EFSEEKIQYL	VYQMLKGL	KYIHSAGVV	HRDLKPGNL	AVNE DCELK	ILDFGLAR	HADAEMT	180
181	GYVTRWYRA	PEVILSWM	HYNQTVDI	WVSGCIMA	EMLTGKTL	FKGKDYLD	QLTQILK	240
241	VPGTEFVQKL	NDKAAKSY	IQSLPQTP	RKDF TQLF	PRASPQA	ADLLEKML	E LDVDKR	300
301	QALHPFFEP	FRDPEETE	EAQQPFD	SLEHEKLT	DEWKQHI	YKEIVNFS	PIARKDS	360
361	SGMKL							420

blue: p38-delta sequence expressed in fusionprotein

¹NCBI/Protein accession number NP_002745.1