

ProQinase™ p38-gamma

Mitogen-activated protein kinase 12

Recombinant Human Active Protein Kinase

HGNC Symbol: MAPK12

Synonyms: ERK-6; ERK3; ERK5; ERK6; PRKM12; SAPK-3; SAPK3;

Product No.: 0958-0000-1

Lot: 002

Description: Human p38-gamma, full length, amino acids M₁-L₃₆₇ (as in NCBI/Protein entry NP_002960.2), activated, untagged, expressed in E.coli

Product identity: p38-gamma Lot 002, was confirmed as p38-gamma LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 42,352 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: 0.165 µg/µl

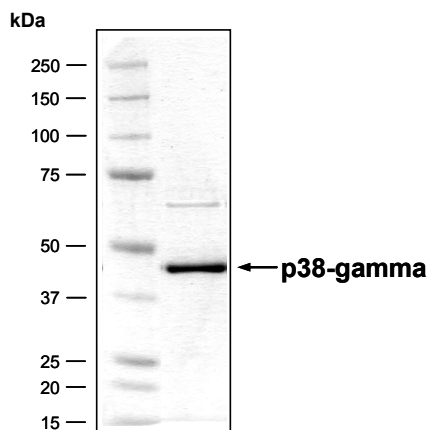
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

Specific kinase activity (P_i transfer): 59 pmol/µg×min

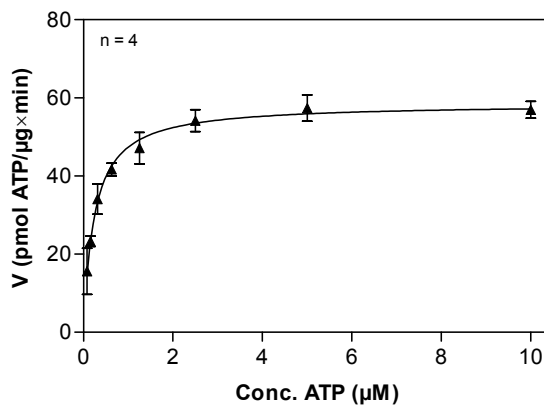
ATP-K_M: 0.2 µM

p38-gamma Lot 002: Coomassie stain



2.0 µg p38-gamma

p38-gamma Lot 002: 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-gamma: 100 ng/ml
 - ALK: 1.0 µg / ml
- Filter binding assay
 - MSFC membrane (Millipore)

ProQinase™ p38-gamma

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p38-gamma Recombinant Fusion Protein Amino Acid Sequence							
1	GPLGSMSSPP	PARSGFYRQE	VTKTAWEVRA	VYRDLQPVGS	GAYGAVCSAV	DGRTGAKVAI	60
61	KKLYRPFQSE	LFAKRAYREL	RLKHMRRHEN	VIGLLDVFTP	DETLDDFTDF	YLVMPFMGTD	120
121	LGKLMKHEKL	GEDRIQFLVY	QMLKGLRYIH	AAGIIHRDLK	PGNLAVNEDC	ELKILDFGLA	180
181	RQADSEMTGY	VVTRWYRAPE	VILNWMRYTQ	TVDIWSVGC	MAEMITGKTL	FKGSDHLDQL	240
241	KEIMKVTGTP	PAEFVQRLQS	DEAKNYMKGL	PELEKKDFAS	ILTNASPLAV	NLLEKMLVLD	300
301	AEQVRTAGEA	LAHPYFESLH	DTEDEPQVQK	YDDSEDDVDR	TLDEWKRVTY	KEVLSFKPPR	360
361	QLGARVSKET	PL					420

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

p38-gamma wt ¹ Amino Acid Sequence							
1	MSSPPPARSG	FYRQEVTKTA	WEVRAVYRDL	QPVGSGAYGA	VCSAVDGRTG	AKVAIKKLYR	60
61	PFQSELFAKR	AYRELRLKX	MRHENVIGLL	DVFTPDETLD	DFTDFYLVMP	FMGTDLGKLM	120
121	KHEKLGEDRI	QFLVYQMLKG	LRYIHAAGII	HRDLKPGNLA	VNEDCELKIL	DFGLARQADS	180
181	EMTGYVVTRW	YRAPEVILNW	MRYTQTVDIW	SVGCIMAEMI	TGKTLFKGSD	HLDQLKEIMK	240
241	VTGTPPAEFV	QRLQSDEAKN	YMKGLPELEK	KDFASILTNA	SPLAVNLEK	MLVLDLAEQRV	300
301	TAGEALAHPY	FESLHDEDE	PQVQKYDDSF	DDVDRTLDEW	KRVTYKEVLS	FKPPRQLGAR	360
361	VSKETPL						420

blue: p38-gamma sequence expressed in fusionprotein

¹NCBI/Protein accession number NP_002960.2

Recombinant Proteins