

ProQinase™ PKC-zeta protein kinase C zeta

Recombinant Human Active Protein Kinase

HGNC Symbol: PRKCZ

Synonyms: PKC2

Product No.: 0117-0000-1

Lot: 005

Description: Human PKC-zeta, amino acids G₁₄-V₅₉₂ (as in [NCBI/Protein](#) entry NP_002735.3), N-terminal GST-HIS₆ fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

Product identity: PKC-zeta Lot 005, was confirmed as PKC-zeta by specific Western blotting

Theoretical MW_{Fusion Protein}: 96,654

Expression host: Sf9 insect cells

Purification: GST-Affinity Chromatography

Activation: This kinase was not activated by special procedures

Storage buffer: 50 mM TRIS-HCl pH 8.0, 100 mM NaCl, 5 mM DTT, 15 mM reduced glutathione, 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: 0.181 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

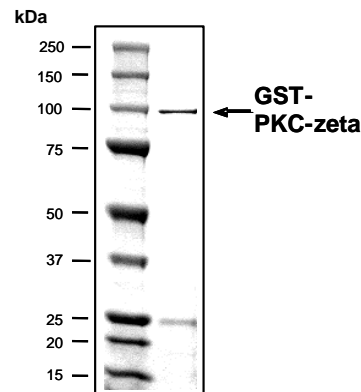
Biochemical Parameters:

Specific kinase activity (P_i transfer): 83 pmol/µg × min
ATP-K_M: 3 µM

Additional assay technology:

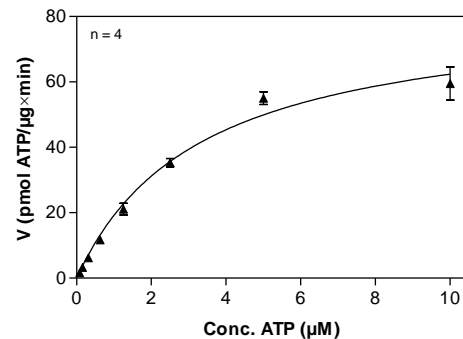
PKC-zeta Lot 005 was also successfully tested by Reaction Biology for the use with the ADP-Glo™ Kinase assay from Promega ADP-Glo assay conditions may vary from radiometric assay conditions, please inquire for assay details

PKC-zeta Lot 005: Coomassie stain



2.0 µg GST-PKC-zeta

PKC-zeta Lot 005: 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; 1 mM CaCl₂
 - 4 mM EDTA
 - 5 µg/ml Phosphatidylserine
 - 1 µg/ml 1,2 Dioleoyl-glycerol
 - 3 µM Na-orthovanadate
 - 1.2 mM DTT
 - 50 µg / ml PEG_{20,000}
 - ATP (variable)
 - Substrate: PKC-derived peptide 20 µg/ml
 - PKC-zeta: 4 µg / ml
- Filter binding assay
- MSPH membrane (Millipore)

ProQinase™ PKC-zeta

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GST-PKC-zeta Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPPEML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAIPOID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHG	RRRASVAAGI	240
241	LVPRGSPGLD	GIYARGIQAS	MGARGRVLK	AHYGGDIFIT	SVDAATTFEE	LCEEVRDMCR	300
301	LHQHPLTLK	WVDEGDPC	VSSQMELEEA	FRLARQCRDE	GLIIHVFPST	PEQPGLPCPG	360
361	EDKSIYRRGA	RRWRKLYRAN	GHLFQAKRFN	RRAYCGQCSE	RIWGLARQGY	RCINCKLLVH	420
421	KRCHGLVPLT	CRKHMSVMP	SQEPVDDKN	EDADLPSEET	DGIAYISSSR	KHDSIKDDSE	480
481	DLKPVIDGMD	GIKISQGLGL	QDFDLIRVIG	RGSYAKVLLV	RLKKNQIYA	MKVVKKELVH	540
541	DDEDIDWVQT	EKHVFEQASS	NPFLVGLHSC	FQTTSRFLV	IEYVNGGDLM	FHMQRQRKLP	600
601	EEHARFYAAE	ICIALNFLHE	RGIIYRDLKL	DNVLLDADGH	IKLTDYGMCK	EGLGPGDTTS	660
661	TFCGTPNYIA	PEILRGEEYG	FSDVWALGV	LMFEMMAGRS	PFDIITDNDP	MNTEDYLFQV	720
721	ILEKPIRIPR	FLSVKASHVL	KGFLNKDPKE	RLGCRPQTGF	SDIKSHAFFR	SIDWLLLEKK	780
781	QALPPFQPI	TDDYGLDNFD	TQFTSEPVQL	TPDDEDAIKR	IDQSEFEGFE	YINPLLLSTE	840
841	ESV						900

1-218: GST Red: HIS6-tag Pink: Thrombin cleavage site blue: PKC-zeta fragment

PKC-zeta wt ¹ Amino Acid Sequence							
1	MPSRTGPKME	GSGGRVRLKA	HYGGDIFITS	VDAATTFEEL	CEEVRDMCRL	HQQHPLTLKW	60
61	VDSEGDPCV	SSQMELEEF	RLARQCRDEG	LIIHVFPSTP	EQPGLPCGGE	DKSIYRRGAR	120
121	RWRKLYRANG	HLFQAKRFNR	RAYCGQCSE	IWGLARQGYR	CINCKLLVHK	RCHGLVPLTC	180
181	RKHMSVMP	QEPVDDKNE	DADLPSEETD	GIAYISSSRK	HDSIKDDSED	LKPVIDGMDG	240
241	IKISQGLGLQ	DFDLIRVIGR	GSYAKVLLVR	LKKNQIYAM	KVVKKELVHD	DEDIDWVQTE	300
301	KHVFEQASSN	PFLVGLHSCF	QTTSRFLVI	EYVNGGDLMF	HMQRQRKLP	EHARFYAAEI	360
361	ICIALNFLHER	GIIYRDLKLD	NVLLDADGHI	KLTDYGMCKE	GLGPGDTTST	FCGTPNYIAP	420
421	EILRGEEYGF	SVDWALGV	MFEMMAGRSP	PFDIITDNDP	NTEDYLFQVI	LEKPIRIPRF	480
481	LSVKASHVLK	GFLNKDPKER	LGCRPQTGFS	DIKSHAFFRS	IDWDLLEKKQ	ALPPFQPQIT	540
541	DDYGLDNFD	QFTSEPVQLT	PDDEDAIKRI	DQSEFEGFEY	INPLLLSTEE	SV	600

blue: PKC-zeta sequence expressed in recombinant protein

¹[NCBI/Protein](#) accession number NP_002735.3