

PKC-alpha

protein kinase C alpha

Recombinant Human Active Protein Kinase

HGNC Symbol: PRKCA

Synonyms: PKCA, PKC-A, PRKACA

Product No.: 0222-0000-1

Lot: 005

Description: Human PKC-alpha, full length, amino acids M₁-V₆₇₂ (as in [NCBI/Protein](#) entry NP_002728.1), N-terminal GST-HIS₆ fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

Product identity: PKC-alpha Lot 005 was confirmed as PKC-alpha by specific Western Blotting

Theoretical MW_{Fusion Protein}: 109,972 Da

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: 0.170 µg/µl

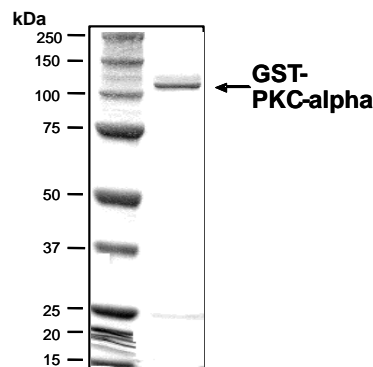
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

Specific kinase activity (P_i transfer): 526 pmol/µg × min

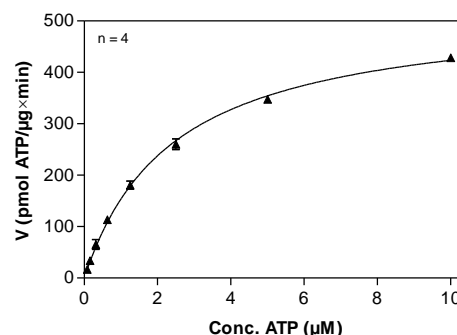
ATP-K_M: 2.4 µM

**PKC-alpha Lot 005:
Coomassie stain**



2.0 µg GST-PKC-alpha

**PKC-alpha 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
 - 3 µM Na-orthovanadate
 - 5 µg/ml Phosphatidylserine
 - 1 µg/ml 1,2 Dioleoyl-glycerol
 - 1.2 mM DTT
 - 50 µg/ml PEG_{20,000}
 - ATP (variable)
 - Substrate: Histone H1, 20 µg/ml
 - Kinase: 1 µg/ml
- Filter binding assay
- MSFC membrane (Millipore)

Additional assay technology:

PKC-alpha Lot 005 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

This product was manufactured at ProQinase in Freiburg, Germany, and is for in vitro research use only, not for use in humans or animals. ProQinase disclaims any warranty explicitly or implied that the use of the product or parts of the product is free from third party intellectual property claims unless this is explicitly stated.

PKC-alpha

Product No.: 0222-0000-1

GST-PKC-alpha Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSM	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLP EML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAI PQID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMG HHHHHG	RRRASVAAGI	240
241	LVPRGS PGLD	GIYARGIQAS	MGARGRQCDG	YLQNSPLSMA	DVFP GNDDTA	SQDVAN R FAR	300
301	KGALRQ KNVH	EVKDHK FIAR	FFKQPT FCSH	CTDFI WFGFK	QGFQ CQVCCF	VVHKRC HEFV	360
361	TFSCPG ADKG	PDTDD PRSKH	KFKIHT YGSP	TFCDH CGSL	YGLIH QGMKC	DTCDM NVHRQ	420
421	CVINVP SLCG	MDHTE KRGRI	YLKAE VAD EK	LHVTV RD AKN	LIRMD PNGLS	DPYVK LKLIP	480
481	DPKNES KQKT	KTIRST LN PQ	WNESFT FKLK	PSDKR RRLSV	EIWDW DR TTR	NDFMG SLSFG	540
541	VSELM KMPAS	GWYKLL NQEE	GEYYN VPIPE	GDEEG NMELR	QKFEK AKLGP	AGNKV IS PSE	600
601	DRKQP SNNLD	RVKLT DFN FL	MVLGK G SFGK	VMLAD RKGT E	ELYAI KILKK	DVVIQ DDVDE	660
661	CTMVE KR VLA	LLDKP PFLTQ	LHSCF QT VDR	LYFV MEYVNG	GDLMY HIQQV	GKFKE PQAVF	720
721	YAAEIS IGLF	FLHKG RGIYR	DLKLD NV MLD	SEGHK IADE	GMCKE HMDG	VTRTF CGT P	780
781	DYIAPE IIAY	QPYGK SVDWW	AYGVLL YEM L	AGQPP FDGED	EDEL FQSIM E	HNSY PKSLS	840
841	KEAVS ICKGL	MTKHP AKRLG	CGPEG ERDVR	EHAFF RRIDW	EKLEN REIQP	PFKPK VCGKG	900
901	AENFD KFFTR	GQPVL TPPDQ	LVIAN IDQSD	FEGFS YVNPQ	FVHP ILQSAV	GKGEF QHTGG	960
961	RY						1020

1-218: GST **Red**: HIS6-tag **Pink**: Thrombin cleavage site **blue**: PKC-alpha **boxed**: variation from RefSeq

PKC-alpha wt ¹ Amino Acid Sequence							
1	MADV FPGNDS	TASQ DVANRF	ARKGAL RQKN	VHEVKD HKFI	ARFFK QPTFC	SHCTD FIWGF	60
61	GKQGF QCQVC	CFVVH KRCHE	FVTFSC PGAD	KGPD TDDPRS	KHKFK IHTYG	SPTFC DHCGS	120
121	LLYGL IHQGM	KCDT CDMNVH	KQCVIN VPSL	CGMDH TEKRG	RIYK AEVAD	EKLH VTVRDA	180
181	KNLI MDPNG	LSDP YVKLKL	IPDP KNESKQ	KTKT IRSTLN	PQWNE SFTFK	LKPSD KDRRL	240
241	SVEI WDWRT	TRND FMGSL	FGVSEL MKMP	ASGWY KLLNQ	EEGE YYNVP	PEGDE EGNME	300
301	LRQK FEKAKL	GPAGN KVISP	SEDRK QPSNN	LDRV KLTD FN	FLMVL GKGSF	GKVML ADRKG	360
361	TEELY AIKIL	KKDV VIQDD	VECTM VEKRV	LALLD KPPFL	TQLH SCFQTV	DRLY FVMEYV	420
421	NGGDL MYHIQ	QVGK FKEPQA	VFYAA EISIG	LFFLH KRGII	YRDL KLDNVM	LDSE GHKIA	480
481	DFGM CKEHMM	DGVT TRTFCG	TPDY IAPEI	AYQP YGKSD	WWAY GVLLYE	MLAG QPPFDG	540
541	EDEDE LFQSI	MEHN VSYPKS	LSKEA VSICK	GLMT KHPAKR	LGCG PEGERD	VREHA FFRRI	600
601	DWEK LENREI	QPPF KPKVCG	KGAEN FDKFF	TRGQ PVLT PP	DQLV IANIDQ	SDFEG FSYVN	660
661	PQFV HPILQS	AV					720

blue: PKC-alpha sequence expressed in recombinant protein **Red**: variant in recombinant protein

¹[NCBI/Protein](#) accession number NP_002728.1

P185R: see [NCBI/Nucleotide](#) accession number AV759756.1 for reference

This product was manufactured at ProQinase in Freiburg, Germany, and is for in vitro research use only, not for use in humans or animals. ProQinase disclaims any warranty explicitly or implied that the use of the product or parts of the product is free from third party intellectual property claims unless this is explicitly stated.