

ProQinase™ PIK3C3

phosphatidylinositol 3-kinase catalytic subunit type 3

Recombinant Human Active Lipid Kinase

HGNC Symbol: PIK3C3

Synonyms: hVps34, PI3-kinase type 3, PI3K type 3, PtdIns-3-kinase type 3, Vps34

Product No.: 1160-0000-1

Lot: 004

Description: Human PIK3C3, full length, amino acids M₁-K₈₈₇ (as in [NCBI/Protein](#) entry NP_002638.2), N-terminal GST-HIS₆ fusion protein with a 3C cleavage site, expressed in Sf9 insect cells

Product identity: PIK3C3 Lot 004, was confirmed as PIK3C3 by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 129,824 Da

Expression host: Sf9 insect cells

Purification: GST-Affinity Chromatography

Activation: This kinase was not activated by special procedures

Storage buffer: 50 mM HEPES pH 7.5, 100 mM NaCl, 5 mM DTT, 15 mM reduced glutathione, 0.1 % Triton X-100, 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: 0.198 µg/µl

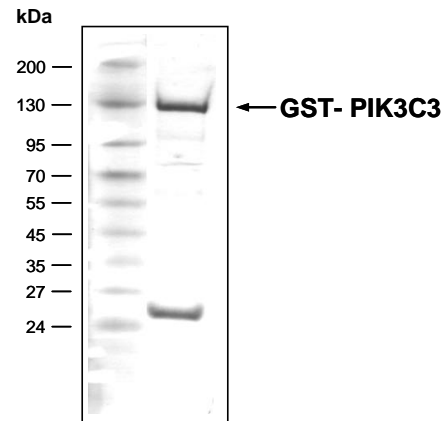
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

Specific kinase activity (P_i transfer): 45 pmol/µg × min

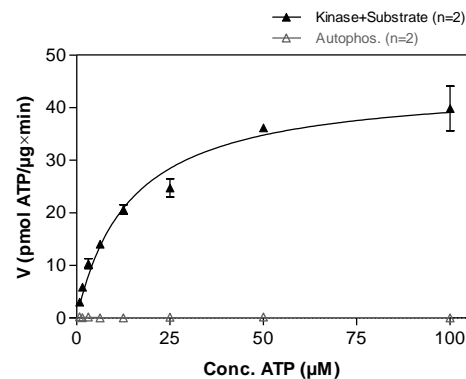
ATP-K_M: 14 µM

PIK3C3 Lot 004: Coomassie stain



4 µg GST-PIK3C3

PIK3C3 Lot 004: Determination of V_{max} and K_M value for ATP



Determination of K_M value & Specific activity:

- Assay conditions:
 - 50 mM HEPES-NaOH, pH 7.5
 - 3 mM MnCl₂
 - 1 mM EGTA
 - 100 mM NaCl
 - 0,03% CHAPS
 - 2 mM DTT
 - ATP: variable concentration
 - 1 % (v/v) DMSO
 - Substrate: PI: L-alpha-phosphatidylinositol 50 µM
 - PIK3C3: 1.0 µg/ml
- Assay technology: ADP-Glo Assay (Promega)

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GST-PIK3C3 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLP EML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAI PQID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHG	RDSLEVLFCG	240
241	PLAMGEAEKF	HYYISCDLDI	NVQLKIGSLE	GKREQKSYKA	VLEDPMLKFS	GLYQETCSDL	300
301	YVTCQVFAEG	KPLALPVRTS	YKAFSTRWNW	NEWLKL PVKY	PDLPRNAQVA	LTIWVYGP	360
361	KAVPVG GTV	SLFGKYGMFR	QGMHDLK VWP	NVEADGSEPT	KTPGRTSSTL	SEDQMSRLAK	420
421	LTKAHRQGHM	VKVDWLDRLT	FREIEMINES	EKRSSNFMYL	MVEFRCVKCD	DKEYGIVYYE	480
481	KDGEDESSPIL	TSFELVKVPD	PQMSMENLVE	SKHHKLARSL	RSGPSDHDLDK	PNAATR DQLN	540
541	IIVSYPP TKQ	LTYYEQDLVW	KFRYYLTNQE	KALT KFLKCV	NWDL PQEAKQ	ALELLGKWKP	600
600	MDVEDSLELL	SSHYTNP TVR	RYAVARLRQA	DDEDLLMYLL	QLVQALKYEN	FDDIKNGLEP	660
661	TKKDSQSSVS	ENVSNGINS	AEIDSSQIIT	SPLPSVSSPP	PASKTKVEPD	GENLEQDLCT	720
721	FLISRACKNS	TLANYLYWYV	IVECEDQDTQ	QRDPKTHEMY	LNVMRFSQA	LLKGDKSVRV	780
781	MRSLLAAQQT	FVDRLVHLMK	AVQRESGNRK	KKNERLQALL	GDNEKMNSD	VELIPLPLEP	840
841	QVKIRGI IPE	TATLFKSALM	PAQLFFKTED	GGKYPVIFKH	GDDL RQDQLI	LQIISLMDKL	900
901	LRKENLDLKL	TPYKVLATST	KHGFMQFIQS	VPVAEVLDT E	GSIQNFFRKY	APSENGNGI	960
961	SAEVM DTYVK	SCAGYCVITY	ILGVGDRHLD	NLLLTKTGKL	FHIDFGYILG	RDPKPLPPPM	1020
1021	KL NKEMVEGM	GDTQSEQYQE	FRKQCYT AFL	HLRRYSNLIL	NLFSLMVDAN	IPDIALEPDK	1080
1081	TVKKVQDKFR	LDLSD EEAHVH	YMQSLIDESV	HALFAAVVEQ	IHKFAQYWRK		1140

1-218: GST Red: HIS6-tag Green: 3C cleavage site blue: PIK3C3

PIK3C3 wt ¹ Amino Acid Sequence							
1	MGEAEK FHYI	YSCDL DINVQ	LKIGSLEGR	EQKSYKAVLE	DPMLKFSGLY	QETCS DLYVT	60
61	CQVFAEGKPL	ALPVRTSYKA	FSTRWNWNEW	LKLPVKYPDL	PRNAQVALTI	WDVYGP GKAV	120
121	PVG GTTVSLF	GKYGMFRQGM	HDLKVWP NVE	ADGSEPTKTP	GRTSSTLSED	QMSRLAKLTK	180
181	AHRQGHMVKV	DWLDRLTFRE	IEMINESEKR	SSNFMYLMVE	FRCVKCDDKE	YGIVYYEKDG	240
241	DESSPILTSF	ELVKVPDPQM	SMENLVESKH	HKLARSLRSG	PSDHDLKPNA	ATRDQLNIIV	300
301	SYPTKQLTY	EEQDLVWKFR	YYLTNQE KAL	TKFLKCVNWD	LPQEAQALE	LLGKWKPM DV	360
361	EDSLELLSSH	YTNPTVRRYA	VARLRQADDE	DLLMYLLQLV	QALKYENFDD	IKNGLEPTFK	420
421	DSQSSVSENV	SNSGINS AEI	DSSQIITSPL	PSVSSPPPAS	KTKEVPDGEN	LEQDLCTFLI	480
481	SRACKNSTLA	NYLYWYVIVE	CEDQDTQQRD	PKTHEMYLNV	MRRFSQALLK	GDKSVRV MRS	540
541	LLAAQQT FVD	RLVHLMKAVQ	RESGNRKKKN	ERLQALLGDN	EKMNSDVEL	IPLPLEPQVK	600
600	IRGIIPETAT	LFKSALMPAQ	LFFKTEDGGK	YPVIFKHGDD	LRQQLILQI	ISLMDKLLRK	660
661	ENLDLKLTPY	KVLATSTKHG	FMQFIQSVPV	AEVLDTEGSI	QNFFRKYAPS	ENGPNGISAE	720
721	VMDTYVKSCA	GVCVITYILG	VGDRHLDNLL	LTKTGKLFHI	DFGYILGRDP	KPLPPPMLKN	780
781	KEMVEGMGGT	QSEQYQEFRK	QCYT AFLHLR	RYSNLILNLF	SIMVDANIPD	IALEPDKTVK	840
841	KVQDKFRDL	SDEEAVHYMQ	SLIDESVHAL	FAAVVEQIHK	FAQYWRK		900

blue: PIK3C3 sequence expressed in recombinant protein

¹NCBI/Protein accession number NP_002638.2