

PLK3

Polo like kinase 3

Recombinant Human Active Protein Kinase

HGNC Symbol: PLK3

Synonyms: CNK; FNK; PRK

Product No.: 0437-0000-1

Lot: 001

Description: Human PLK3, C-terminal fragment, amino acids M₄₀-A₆₄₆ (as in [NCBI/Protein](#) entry NP_004064.2), N-terminal GST-HIS₆ fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

Product identity: PLK3 Lot 001, was confirmed as PLK3 by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 97,131 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, 4 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: 0.097 µg/µl

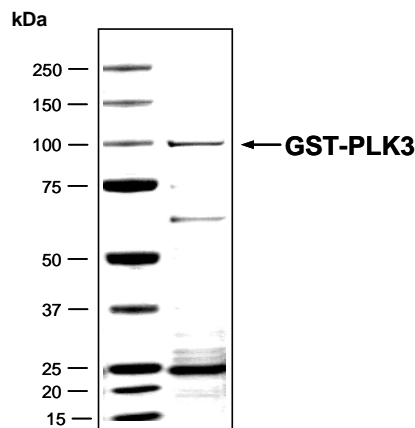
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

Specific kinase activity (P_i transfer): 20 pmol/µg × min

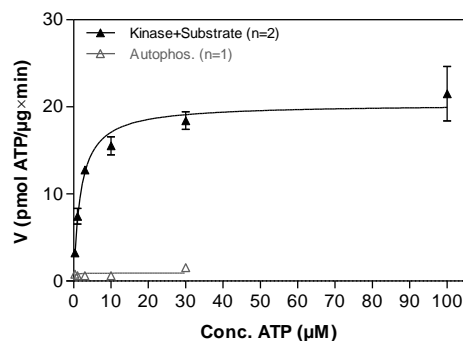
ATP-K_M: 1.9 µM

PLK3 Lot 001:
Coomassie stain



2.0 µg GST-PLK3

PLK3 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: RBER-CDC25tide, 60 µg/ml
 - PLK3: 1 µg/ml
- Filter binding assay
- MSFC membrane (Millipore)

Additional assay technology:

PLK3 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

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GST-PLK3 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRLL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFNLPYYID	60
61	GDVKLTQSM	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPPEML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAIPIQID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHG	RRRASVAAGI	240
241	LVPRGSPGLD	GICSRMLAGL	PTSDPGRLLT	DPRSGRTYTK	GRLLGKGGFA	RCYEATDTET	300
301	GSAYAVKVIP	QSRVAKPHQR	EKILNEIELH	RDLQRRHIVR	FSHHFEDADN	IYIFLELCSR	360
361	KSLAHIWKAR	HTLLEPEVRY	YLRQILSGLK	YLHQRGILHR	DLKLGNTFFIT	ENMELKVGDF	420
421	GLAARLEPPE	QRKKTICGTP	NYVAPEVLLR	QGHGPEADVW	SLGCVMYTLL	CGSPPFETAD	480
481	LKETRYCIKQ	VHYTLPASLS	LPARQLLAAI	LRASPRDRPS	IDQILRHDFL	TKGYTPDRLP	540
541	ISSCVTVPDL	TPPNPARSLF	AKVTKSLFGR	KKKSKNHAQE	RDEVSGLVSG	LMRTSVGHQD	600
600	ARPEAPAASG	PAPVSLVETA	PEDSSPRGTL	ASSGDGFEEG	LTVATVVESA	LCALRNCFIAF	660
661	MPPAEQNPAP	LAQPEPLVWV	SKWVDYSNKF	GFGYQLSSRR	VAVLFNDGTH	MALSANRKTV	720
721	HYNPTSTKHF	SFSVGAVPRA	LQPQLGILRY	FASYMEQHLM	KGGDLPSVEE	VEVPAPLLL	780
781	QWVKTDQALL	MLFSDGTVOV	NFYGDHTKLI	LSGWEPPLVT	FVARNRSACT	YLASHLRQLG	840
841	CSPDLRQRLR	YALRLLRDRS	PA				900

1-218: GST Red: HIS6-tag Pink: Thrombin cleavage site blue: PLK3 fragment

PLK3 wt ¹ Amino Acid Sequence							
1	MEPAAGFLSP	RPFQRAAAAP	APPAGPGPPP	SALRGPELEM	LAGLPTSDPG	RLITDPRSGR	60
61	TYLKGRLGK	GGFARCYEAT	DTETGSAYAV	KVIPQSRVAK	PHQREKILNE	IELHRDLQHR	120
121	HIVRFSSHFE	DADNIYIFLE	LCSRKSLAHI	WKARHTLLEP	EVRYYLQIIL	SGLKYLHQRG	180
181	ILHRDLKLG	FFITENMELK	VGDFGLAARL	EPPEQRKTI	CGTPNYVAPE	VLLRQGHGPE	240
241	ADVWSLGCVM	YTLGCGSPPF	ETADLKETYR	CIKQVHYTLP	ASLSLPARQL	LAAILRASPR	300
301	DRPSIDQILR	HDFFTKGYTP	DRLPISSCVT	VPDLTPPNPA	RSLFAKVTKS	LFGRKKKSKN	360
361	HAQERDEVSG	LVSGLMRTSV	GHQDARPEAP	AASGPAPVSL	VETAPEDSSP	RGTLASSGDG	420
421	FEGLTVATV	VESALCALRN	CIAFMPPAEQ	NPAPLAQPEP	LVVWSKWVDY	SNKFGFGYQL	480
481	SSRRVAVLFN	DGTHMALSAN	RKTVHYNPTS	TKHFSFSVGA	VPRALQPQLG	ILRYFASYME	540
541	QHLMKGGDLP	SVEEVEVPAP	PLLLQWVKTD	QALLMLFSDG	TVQVNFYGDH	TKLILSGWEP	600
601	LLVTFVARNR	SACTYLASHL	RQLGCSPDLR	QRLRYALRLL	RDRSPA		660

blue: PLK3 sequence expressed in recombinant protein

¹[NCBI/Protein](#) accession number NP_004064.2

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