

ProQinase™ PAK6

p21 protein (Cdc42/Rac)-activated kinase 6

Recombinant Human Active Protein Kinase

HGNC Symbol: PAK6

Synonyms: PAK5

Product No.: 0423-0000-1

Lot: 001

Description: Human PAK6, full length, amino acids M₁-C₆₈₁ (as in NCBI/Protein entry NP_064553.1), N-terminal GST-HIS₆ fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

Product identity: PAK6 Lot 001, was confirmed as PAK6 by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 104,780 Da

Expression: Baculovirus infected Sf9 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, 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: 0.082 µg/µl

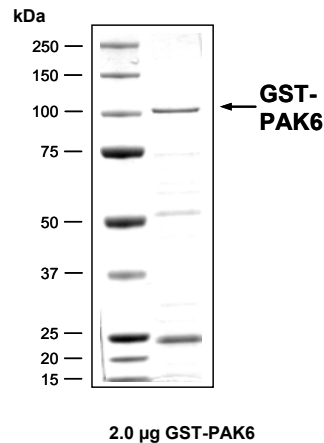
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

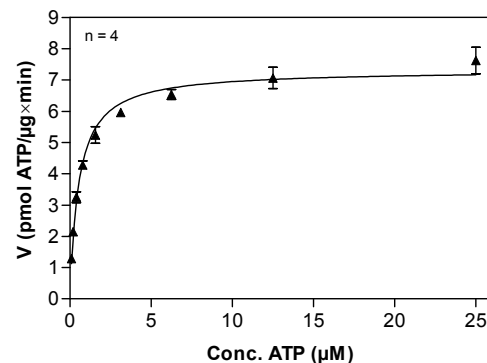
Specific kinase activity (P_i transfer): 7.3 pmol/µg×min

ATP-K_M: 0.5 µM

PAK6 Lot 001: Coomassie stain



PAK6 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: tetra(LRRWSLG), 30 µg/ml
 - Kinase: 4.0 µg / ml
- Filter binding assay
 - MSPH membrane (Millipore)

Additional assay technology: PAK6 Lot 001

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



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PAK6 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPEML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAIPOID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHG	RRRASVAAGI	240
241	LVPRGSPGLD	GIYARGIQAS	MFRKKKKKRP	EISAPQNFQH	RVHTSFDPK	GKRVGLPPQW	300
301	QNILDTLRRP	KPVVDPSRIT	RVQLQPMKTV	VRGSAMPVDG	YISGLLNDIQ	KLSVISSNTL	360
361	RGRSPTSRRR	AQSLGLLGDE	HWATDPDMYL	QSPQSERTDP	HGLYLSCNGG	TPAGHKQMPW	420
421	PEPQSPRVLP	NGLAAKAQSL	GPAEFQASQ	RCLQLGACLQ	SSPPGASPPT	GTNRHGMKAA	480
481	KHGSEEARPQ	SCLVGSATGR	PGGEGSPSPK	TRESSLKRRL	FRSMFLSTAA	TAPPSSSKPG	540
541	PPPQSKPNSS	FRPPQKDNPP	SLVAKAQSLP	SDQPVGTFSP	LTTSDTSSPQ	KSLRTAATG	600
601	QLPGRSSPAG	SPRTWHAQIS	TSNLYLPQDP	TVAKGALAGE	DTGVVTHEQF	KAALRMVVDQ	660
661	GDPRLLLDYS	VKIGEGSTGI	VCLAREKHSG	RQVAVKMMDL	RKQQRRELLF	NEVVIMRDYQ	720
721	HFNVVEMYKS	YLVGEELWVL	MEFLQGGALT	DIVSQVRLNE	EQIATVCEAV	LQALAYLHAQ	780
781	GVIHRDIKSD	SILLTLDGRV	KLSDFGFCAQ	ISKDVPKRKS	LVGTPYWMAP	EVISRSLYAT	840
841	EVDIWSLGIM	VIEMVDGEP	YFSDSPVQAM	KRLRDSPPP	LKNSHKVSPV	LRDFLERMLV	900
901	RDPQERATAQ	ELLDHPFLLQ	TGLPECLVPL	IQLYRQTST	C		960

1-218: GST **Red**: HIS6-tag **Pink**: Thrombin cleavage site **blue**:PAK6 **boxed**:variation from RefSeq

PAK6 wt ¹ Amino Acid Sequence							
1	MFRKKKKKRP	EISAPQNFQH	RVHTSFDPK	GKRVGLPPQW	QNILDTLRRP	KPVVDPSRIT	60
61	RVQLQPMKTV	VRGSAMPVDG	YISGLLNDIQ	KLSVISSNTL	RGRSPTSRRR	AQSLGLLGDE	120
121	HWATDPDMYL	QSPQSERTDP	HGLYLSCNGG	TPAGHKQMPW	PEPQSPRVLP	NGLAAKAQSL	180
181	GPAEFQASQ	RCLQLGACLQ	SSPPGASPPT	GTNRHGMKAA	KHGSEEARPQ	SCLVGSATGR	240
241	PGGEGSPSPK	TRESSLKRRL	FRSMFLSTAA	TAPPSSSKPG	PPPQSKPNSS	FRPPQKDNPP	300
301	SLVAKAQSLP	SDQPVGTFSP	LTTSDTSSPQ	KSLRTAATG	QLPGRSSPAG	SPRTWHAQIS	360
361	TSNLYLPQDP	TVAKGALAGE	DTGVVTHEQF	KAALRMVVDQ	GDPRLLLDYS	VKIGEGSTGI	420
421	VCLAREKHSG	RQVAVKMMDL	RKQQRRELLF	NEVVIMRDYQ	HFNVVEMYKS	YLVGEELWVL	480
481	MEFLQGGALT	DIVSQVRLNE	EQIATVCEAV	LQALAYLHAQ	GVIHRDIKSD	SILLTLDGRV	540
541	KLSDFGFCAQ	ISKDVPKRKS	LVGTPYWMAP	EVISRSLYAT	EVDIWSLGIM	VIEMVDGEP	600
601	YFSDSPVQAM	KRLRDSPPP	LKNSHKVSPV	LRDFLERMLV	RDPQERATAQ	ELLDHPFLLQ	660
661	TGLPECLVPL	IQLYRQTST	C				720

blue: PAK6 sequence expressed in fusion protein **Red**: variant in fusion protein

¹NCBI/Protein accession number NP_064553.1
P₃₃₇L: SNP variation see NCBI/dbSNP ID: rs3743137

Recombinant Proteins