

ProQinase™ PAK3

p21 (RAC1) activated kinase 3

Recombinant Human Active Protein Kinase

HGNC Symbol: PAK3

Synonyms: CDKN1A; MRX30; MRX47; OPHN3; PAK3beta; bPAK; hPAK3

Product No.: 0422-0000-1

Lot: 001

Description: Human PAK3, full length, amino acids M₁-R₅₄₄ (as in [NCBI/Protein](#) entry NP_002569.1), N-terminal GST-HIS₆ fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

Product identity: PAK3 Lot 001, was confirmed as PAK3 by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 90,588 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, 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: 0.360 µg/µl

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

Biochemical Parameters:

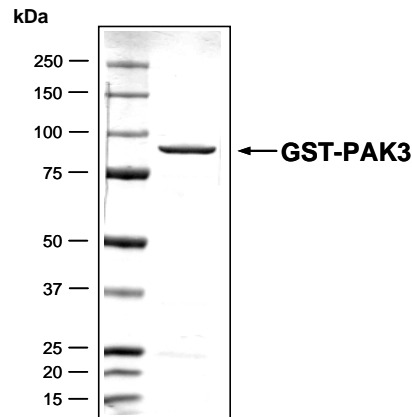
Specific kinase activity (P_i transfer): 79 pmol/µg × min

ATP-K_M: 15 µM

Additional assay technology:

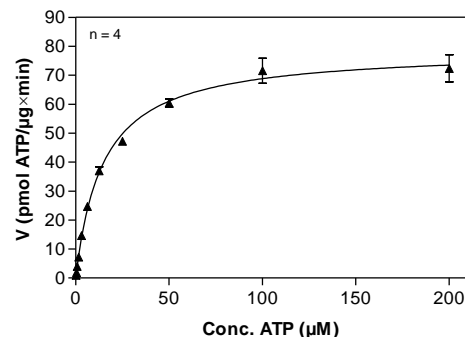
PAK3 Lot 001 was also successfully tested by Reaction Biology for the use with the ADP-Glo™ Kinase assay from Promega ADP-Glo assay conditions may vary from radiometric assay conditions, please inquire for assay details

PAK3 Lot 001: Coomassie stain



2.0 µg GST-PAK3

PAK3 Lot 001: Determination of V_{max} and K_M value for ATP



- 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), 40 µg/ml
Kinase: 4 µg/ml
- Filter binding assay
MSFC membrane (Millipore)

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GST-PAK3 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	MSDGLDNEEK	PPAPPLRMNS	NNRDSSALNH	SSKPLPMAPE	300
301	EKNKKARLRS	IFPGGGDKTN	KKKEKERPEI	SLPSDFEHTI	HVGFDAVTGE	FTGIPEQWAR	360
361	LLQTSNITKL	EQKKNPQAVL	DVLKIFYDSKE	TVNNQKYMSE	TSGDKSAHGY	IAAHPSSTKT	420
421	ASEPPLAPPV	SEEEDEEEEE	EEDENEPPPV	IAPRPEHTKS	IYTRSVVESI	ASPAVPNKEV	480
481	TPPSAENANS	STLYRNTDRQ	RKKSMTDEE	ILEKLSIVS	VGDPKKKYTR	FEKIGQGASG	540
541	TVYTALDIAT	GQEVAIQOMN	LQQQPKKELI	INEILVMREN	KNPNIVNYLD	SYLVGDELWV	600
601	VMEYLAGGSL	TDVVTETCMD	EGQIAAVCRE	CLQALDFLHS	NQVIHRDIKS	DNILLGMDGS	660
661	VKLTDFGFCA	QITPEQSKRS	TMVGTPYWMA	PEVVTRKAYG	PKVDIWSLGI	MAIEMVEGEP	720
721	PYLNENPLRA	LYLIATNGTP	ELQNPERLSA	VFRDFLNRCL	EMDVDRRGS	KELLQHPFLK	780
781	LAKPLSSLTP	LIIAAKEAIK	NSSR				840

1-218: GST Red: HIS6-tag Pink: Thrombin cleavage site blue: PAK3

PAK3 wt ¹ Amino Acid Sequence							
1	MSDGLDNEEK	PPAPPLRMNS	NNRDSSALNH	SSKPLPMAPE	EKNKKARLRS	IFPGGGDKTN	60
61	KKKEKERPEI	SLPSDFEHTI	HVGFDAVTGE	FTGIPEQWAR	LLQTSNITKL	EQKKNPQAVL	120
121	DVLKIFYDSKE	TVNNQKYMSE	TSGDKSAHGY	IAAHPSSTKT	ASEPPLAPPV	SEEEDEEEEE	180
181	EEDENEPPPV	IAPRPEHTKS	IYTRSVVESI	ASPAVPNKEV	TPPSAENANS	STLYRNTDRQ	240
241	RKKSMTDEE	ILEKLSIVS	VGDPKKKYTR	FEKIGQGASG	TVYTALDIAT	GQEVAIQOMN	300
301	LQQQPKKELI	INEILVMREN	KNPNIVNYLD	SYLVGDELWV	VMEYLAGGSL	TDVVTETCMD	360
361	EGQIAAVCRE	CLQALDFLHS	NQVIHRDIKS	DNILLGMDGS	VKLTDFGFCA	QITPEQSKRS	420
421	TMVGTPYWMA	PEVVTRKAYG	PKVDIWSLGI	MAIEMVEGEP	PYLNENPLRA	LYLIATNGTP	480
481	ELQNPERLSA	VFRDFLNRCL	EMDVDRRGS	KELLQHPFLK	LAKPLSSLTP	LIIAAKEAIK	540
541	NSSR						600

blue: PAK3 sequence expressed in recombinant protein

¹[NCBI/Protein](#) accession number NP_002569.1