

ProQinase™ PAK7

p21 (CDKN1A)-activated kinase 7

Recombinant Human Active Protein Kinase

HGNC Symbol: PAK7

Synonyms: PAK5, KIAA1264

Product No.: 0410-0000-1

Lot: 001

Description: Human PAK7, full length, amino acids M₁-H₇₁₉ (as in NCBI/Protein entry NP_065074.1), N-terminal GST-HIS₆ fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

Product identity: PAK7 Lot 001, was confirmed as human PAK7 by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 110,660 Da

Expression: Baculovirus infected Sf9 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: 0.152 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

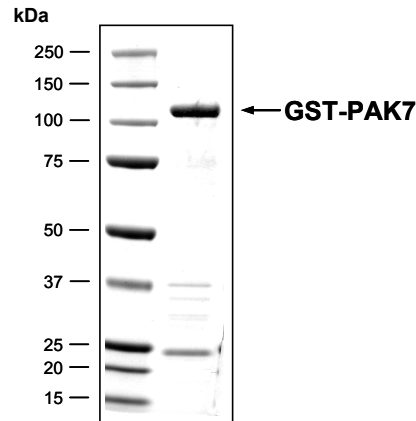
Biochemical Parameters:

Specific kinase activity (P_i transfer): 18 pmol/µg×min
ATP-K_M: 1.1 µM

Additional assay technology: PAK7 Lot 001

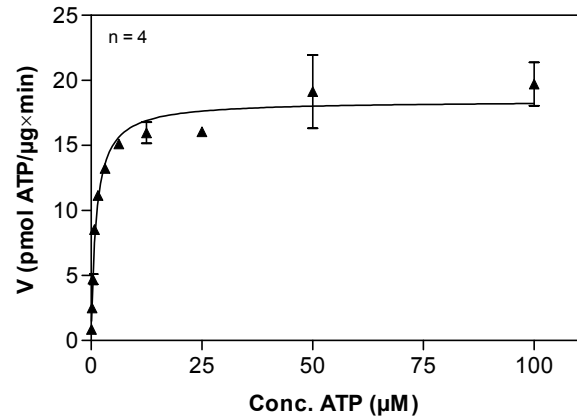
was also successfully tested by Reaction Biology for the use with the ADP-Glo™ Kinase assay from ADP-Glo assay conditions may vary from radiometric assay conditions, please inquire for assay details

PAK7 Lot 001: Coomassie stain



2.0 µg GST-PAK7

PAK7 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), 40 µg/ml
 - PAK7: 4.0 µg/ml
- Filter binding assay
 - MSFC membrane (Millipore)

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PAK7 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	LVPRGS PGLD	GICSIEEFGT	MFGKKKKKIE	ISGPSNFEHR	VHTGFDPQEQ	KFTGLPQQWH	300
301	SLLDATANRP	KPMVDPSCIT	PIQLAPMKTI	VRGNKPKET	SINGLLEDFD	NISVTRSNSL	360
361	RKESPTPDQ	GASSHGPGHA	EENGFITFSQ	YSSESDDTAD	YTTEKYREKS	LYGDDLDPY	420
421	RGSHAAKQNG	HVMKMKHGEA	YYSEVKPLKS	DFARFSADYH	SHLDSLKPS	EYSDLKWEYQ	480
481	RASSSSPLDY	SFQFTPSRTA	GTSGCSKESL	AYSESEWGPS	LDDYDRRPKS	SYLNQTSQP	540
541	TMRQRSRSGS	GLQEPMPFG	ASAFKTHPQG	HSYNSYTYPR	LSEPTMCIPK	VDYDRAQMV	600
601	SPPLSGSDTY	PRGPAKLPQS	QSKSGYSSSS	HQYPSGYHKA	TLYHHPSLQS	SSQYISTASY	660
661	LSSLSSSST	YPPPSWGSSS	DQQPSRVSHE	QFRAALQLVV	SPGDPREYLA	NFIKIGEGST	720
721	GIVCIATEKH	TGKQVAVKKM	DLRKQORREL	LFNEVVIMRD	YHHDNVDMY	SSYLVGDELW	780
781	VMEFLEGGA	LTDIVTHTRM	NEEQIATVCL	SVLRALSYLH	NQGVHRDIK	SDSILLTSDG	840
841	RIKLSDFGFC	AQVSKEVPKR	KSLVGTPLYWM	APEVISRLPY	GTEVDIWSLG	IMVIEMIDGE	900
901	PPYFNEPPLQ	AMRRIRDSL	PRVKDLHKVS	SVLRGFLDLM	LVREPSQRAT	AQELLGHPFL	960
961	KLGPSCIV	PLMRQYRHH					1020

1-218: GST **Red**: HIS6-tag **Pink**: Thrombin cleavage site **blue**: PAK7

PAK7 wt¹ Amino Acid Sequence

1	MFGKKKKKIE	ISGPSNFEHR	VHTGFDPQEQ	KFTGLPQQWH	SLLDATANRP	KPMVDPSCIT	60
61	PIQLAPMKTI	VRGNKPKET	SINGLLEDFD	NISVTRSNSL	RKESPTPDQ	GASSHGPGHA	120
121	EENGFITFSQ	YSSESDDTAD	YTTEKYREKS	LYGDDLDPY	RGSHAAKQNG	HVMKMKHGEA	180
181	YYSEVKPLKS	DFARFSADYH	SHLDSLKPS	EYSDLKWEYQ	RASSSSPLDY	SFQFTPSRTA	240
241	GTSGCSKESL	AYSESEWGPS	LDDYDRRPKS	SYLNQTSQP	TMRQRSRSGS	GLQEPMPFG	300
301	ASAFKTHPQG	HSYNSYTYPR	LSEPTMCIPK	VDYDRAQMV	SPPLSGSDTY	PRGPAKLPQS	360
361	QSKSGYSSSS	HQYPSGYHKA	TLYHHPSLQS	SSQYISTASY	LSSLSSSST	YPPPSWGSSS	420
421	DQQPSRVSHE	QFRAALQLVV	SPGDPREYLA	NFIKIGEGST	GIVCIATEKH	TGKQVAVKKM	480
481	DLRKQORREL	LFNEVVIMRD	YHHDNVDMY	SSYLVGDELW	VMEFLEGGA	LTDIVTHTRM	540
541	NEEQIATVCL	SVLRALSYLH	NQGVHRDIK	SDSILLTSDG	RIKLSDFGFC	AQVSKEVPKR	600
601	KSLVGTPLYWM	APEVISRLPY	GTEVDIWSLG	IMVIEMIDGE	PPYFNEPPLQ	AMRRIRDSL	660
661	PRVKDLHKVS	SVLRGFLDLM	LVREPSQRAT	AQELLGHPFL	KLGPSCIV	PLMRQYRHH	720

blue: PAK7 sequence expressed in fusionprotein

¹NCBI/Protein accession number NP_065074.1

Recombinant Proteins