

ProQinase™ NEK5

NIMA related kinase 5

Recombinant Human Active Protein Kinase

HGNC Symbol: NEK5

Synonyms: /

Product No.: 2121-0000-1

Lot: 001

Description: Human NEK5, N-terminal fragment, amino acids M₁-S₅₀₈ (as in [NCBI/Protein](#) entry NP_954983.1), N-terminal GST-HIS₆ fusion protein with a 3C cleavage site, expressed in Sf9 insect cells

Product identity: NEK5 Lot 001, has been verified by mass spectrometry LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 87193 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, 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 10 µl are not advisable. Avoid repeated freeze-thaw cycles!

Protein concentration: 0.276 µg/µl

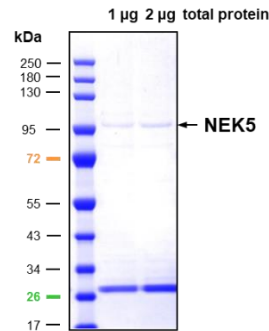
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

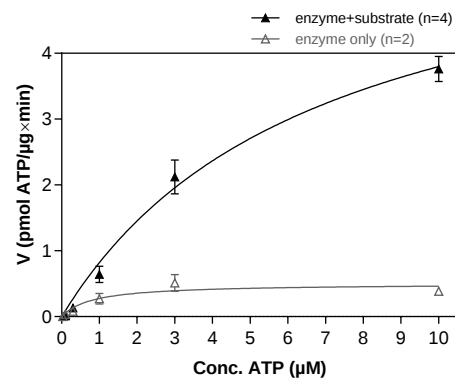
Specific kinase activity (P_i transfer): 6.4 pmol/µg*min

ATP-K_M: 6.8 µM

NEK5 Lot 001:
Coomassie stain



NEK5 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: RBER-GSK3 80 µg/ml
 - Kinase: 1.5 µg/ml

Assay technology:
Radiometric filter binding assay
MSFC membrane (96 well plate, Millipore)

Recombinant Proteins

Sequence information

GST-NEK5 Recombinant Fusion Protein Amino Acid Sequence

1	MSPILGYWKI	KGLVQPTRLL	LEYLEEKYEE	HLIERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPEML	KMFKDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAIPOID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHHG	RDSLEVLFGG	240
241	PMKYDVIKA	IGQGAFGKAY	LAKGKSDSKH	CVIKEINFKEK	MPIQEKEASK	KEVILLEKMK	300
301	HPNIVAFFNS	FQENGRLFTV	MEYCDGGDLM	KRINRQGVFL	FSEDQILGWF	VQISLGLKHI	360
361	HDRKILHRDI	KAQNIFLSKN	GMVAKLGDFG	IARVLNNSME	LARTCIGTPY	YLSPEICQNK	420
421	PYNNKTDIWS	LGCVLVELCT	LKHPFEGNNL	QQLVLKICQA	HFAPISPGFS	RELHSLISQL	480
481	FQVSPDRDPS	INSILKRPFL	ENLIPKYLTP	EVIQEEFSHM	LICRAGAPAS	RHAGKVQKCK	540
541	KIQKVRFGKC	CPPRSISRISV	IKRNAILHRN	EWPPAGAQAQ	ARSIKMIERP	KIAAVCGHYD	600
601	YYAQLDMLR	RAHKPSYHP	IPQENTGVED	YGQETRHGPS	PSQWPAEYLQ	RKFEAQQYKL	660
661	KVEKQLGLRP	SSAEPNYNQR	QELRSNGEEP	RFQELPFRKN	EMKEQEYWKQ	LEEIRQQYHN	720
721	DMKEIRKKMG	REPEENSKIS	HKTYLVKKS				780

1-218: GST Red: HIS6-tag Green: 3C cleavage site blue: NEK5 fragment

NEK5 wt¹ Amino Acid Sequence

1	MDKYDVIKAI	GQGAFGKAYL	AKGKSDSKHC	VIKEINFEM	PIQEKEASKK	EVILLEKMKH	60
61	PNIVAFFNSF	QENGRLFIVM	EYCDGGDLMK	RINRQGVLF	SEDQILGWV	QISLGLKHIH	120
121	DRKILHRDIK	AQNIFLSKNG	MVAKLGDFGI	ARVLNNSMEL	ARTCIGTPYY	LSPEICQNKP	180
181	YNNKTDIWSL	GCVLYELCTL	KHPFEGNNLQ	QLVLKICQAH	FAPISPGFSR	ELHSLISQLF	240
241	QVSPDRDPSI	NSILKRPFLE	NLIPKYLTP	VIQEEFSHML	ICRAGAPASR	HAGKVQKCK	300
301	IQKVRFGKCK	PPRSISRISVPI	KRNAILHRNE	WRPPAGAQAQ	RSIKMIERPK	IAAVCGHYDY	360
361	YYAQLDMLRR	RAHKPSYHPI	PQENTGVEDY	GQETRHGPS	SQWPAEYLQR	KFEAQQYKLK	420
421	VEKQLGLRPS	SAEPNYNQRQ	ELRSNGEEP	FQELPFRKNE	MKEQEYWKQL	EEIRQQYHND	480
481	MKEIRKKMGR	EPEENSKISH	KTYLVKKS	NL	PVHQDASEGE	APVQMEFRSC	540
541	WLTATSASQD	IEKDLKQMR	QNTKESKNPE	QKYKAKKGK	FEINLDKCIS	DENILQEEEA	600
601	MDIPNETLTF	EDGMKFKEYE	CVKEHGDYTD	KAFEKLHCPE	AGFSTQTVAA	VGNRRQWDGG	660
661	APQTLLQMM	VADITSTCPT	GPDSSEVLSV	SRQEGTKD	YSPVLILM		720

blue: NEK5 sequence expressed in recombinant protein

¹NCBI/Protein accession number NP_954983.1

Recombinant Proteins