

NEK7

NIMA related kinase 7

Recombinant Human Active Protein Kinase

HGNC Symbol: NEK7

Synonyms: n/a

Product No.: 0669-0000-1

Lot: 002

Description: Human NEK7, amino acids M₁-S₃₀₂ (as in [NCBI/Protein](#) entry NP_598001.1), N-terminal GST-HIS₆ fusion protein with a 3C cleavage site, expressed in Sf9 insect cells

Product identity: NEK7 Lot 002, was confirmed as NEK7 by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 65,270 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 10µl are not advisable. Avoid repeated freeze-thaw cycles!

Protein concentration: 0.366 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

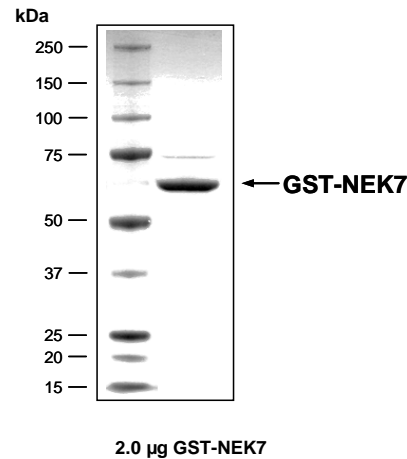
Biochemical Parameters:

Specific kinase activity (P_i transfer): 106 pmol/µg × min
ATP-K_M: 1.1 µM

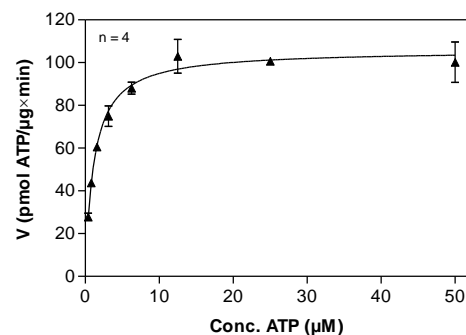
Additional assay technology:

NEK7 Lot 002 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

NEK7 Lot 002: Coomassie stain



NEK7 Lot 002: 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: Casein 100 µg/ml
 - Kinase: 1 µg/ml
- Filter binding assay
MSFC membrane (Millipore)

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GST-NEK7 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLIERDEGDK	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	GIYARDSLEV	LFQGPLAMDE	QSQGMQPPV	PQFQPQKALR	PDMGYNTLAN	300
301	FRIEKKIGRG	QFSEVYRAAC	LLDGVVVALK	KVQIFDLMDA	KARADCIKEI	DLLQLNHPN	360
361	VIKYASFIE	DNELNIVLEL	ADAGLSRMI	KHFKKQKRLI	PERTVWKYFV	QLCSALEHMH	420
421	SRRVMHRDIK	PANVFITATG	VVKLGDGLG	RFFSSKTAA	HSLVGTPTYM	SPERIHENGY	480
481	NFKSDIWSLG	CLLYEMAALQ	SPFYGDKMNL	YSLCKKIEQC	DYPPLPSDHY	SEELRQLVNM	540
541	CINPDPEKRP	DVTYVYDVAK	RMHACTASS				600

1-218: GST Red: HIS6-tag Pink: Thrombin cleavage site Green: 3C cleavage site blue: NEK7

NEK7 wt ¹ Amino Acid Sequence							
1	MDEQSQGMQG	PPVPPQFQPK	ALRPDMGYNT	LANFRIEKKI	GRGQFSEVYR	AACLLDGVVP	60
61	ALKKVQIFDL	MDAKARADCI	KEIDLLKQLN	HPNVIKYYAS	FIEDNELNIV	LELADAGDLS	120
121	RMIKHFQKQK	RLIPERTVWK	YFVQLCSALE	HMHSRRVMHR	DIKPANVFIT	ATGVVKLGD	180
181	GLGRFFSSKT	TAAHSLVGTP	YYMSPERIHE	NGYNFKSDIW	SLGCLLYEMA	ALQSPFYGDK	240
241	MNLYSLCKKI	EQCDYPLPLS	DHYSEELRQL	VNMCINPDPE	KRPDVTYVYD	VAKRMHACTA	300
301	SS						360

blue: NEK7 sequence expressed in recombinant protein

¹[NCBI/Protein](#) accession number NP_598001.1

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