

ProQinase™ NIK

NF-kappa-beta-inducing kinase

Recombinant Human Active Protein Kinase

HGNC Symbol: MAP3K14

Synonyms: FTDCR1B, HS, HSNIK

Product No.: 0344-0000-1

Lot: 027

Description: Human NIK, full length, amino acids M₁-P₉₄₇ (as in [NCBI/Protein](#) entry NP_003945.2), N-terminal GST-HIS₆ fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

Product identity: NIK Lot 027, was confirmed as NIK by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 133,437 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

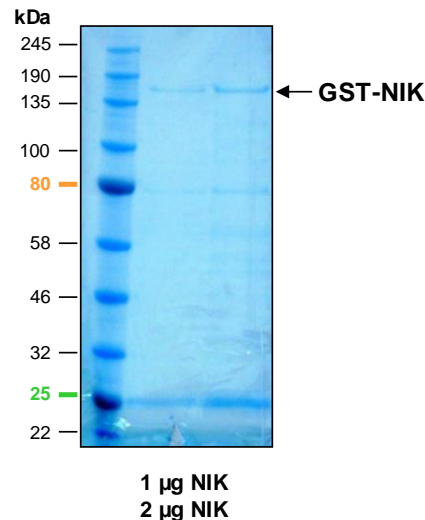
For complete recovery, mix well and spin before use. Product must not be stored in diluted solutions, aliquots below 10µl are not advisable. Avoid repeated freeze-thaw cycles!

Protein concentration: 0.135 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

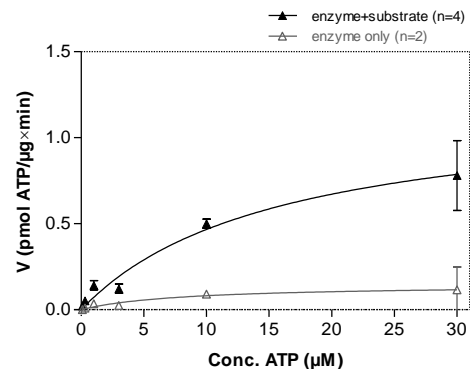
Biochemical Parameters:

Specific kinase activity (P_i transfer): 1.2 pmol/µg × min
ATP-K_M: 16 µM

NIK Lot 027: Coomassie stain



NIK Lot 027: 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: CDC25C-derived peptide, 80 µg/ml
 - NIK: 2 µg/ml
- Filter binding assay
 - MSPH membrane (Millipore)

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GST-NIK 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	PMG HHHHH HG	RRRASVAAGI	240
241	LVPRGS PGLD	GICSR MAVME	MACPGAPGSA	VGQKELPKA	KEKTPLGKK	QSSVYKLEAV	300
301	EKSPVFCGW	EILNDVITKG	TAKEGSEAGP	AAISIIAQAE	CENSQEFSP	FSERIFIAGS	360
361	KQYSQSESLD	QIPNNVAHAT	EGKMARVCWK	GKRRSKARKK	RKKKSSKSLA	HAGVALAKPL	420
421	PRTPEQESCT	IPVQEDESPL	GAPYVRNTPQ	FTKPLKEPGL	GQLCFKQLGE	GLRPALPRSE	480
481	LHKLISPLQC	LNHVWKLHHP	QDGGPLPLPT	HPFPYSRLPH	PFPFHPLQPW	KPHPLESFLG	540
541	KLACVDSQKP	LPDPHLSKLA	CVDSPKPLPG	PHLEPSCLSR	GAHEKFSVEE	YLVHALQGSV	600
601	SSGQAHSLTS	LAKTWAARGS	RSREPSPKTE	DNEGVLLETK	LKPVVDYEYRE	EVHWATHQLR	660
661	LGRVSGFGEVH	RMEDKQTGFQ	CAVKKVRLEV	FRAEELMACA	GLTSPRIVPL	YGAVREGPWV	720
721	NI FMELLEGG	SLGQLVKEQG	CLPEDRALYY	LGQALEGLE	LHSRRILHGD	VKADNVLLSS	780
781	DGSHAALCDF	GHAVCLQPDG	LGKSLLTGDY	IPGTETHMAP	EVVLGRSCDA	KVDVWSSCCM	840
841	MLHMLNGCHP	WTQFFRGPLC	LKIASEPPPV	REIPPSCAPL	TAQAIQEGLR	KEPIHRVSAA	900
901	ELGGKVNRL	QQVGGLKSPW	RGEYKEPRHP	PPNQANYHQT	LHAQPRELSP	RAPGPRPAEE	960
961	TTGRAPKLQP	PLPPEPPEPN	KSPPLTLSKE	ESGMWEPLPL	SSLEPAPARN	PSSPERKATV	1020
1021	PEQELQQLEI	ELFLNLSLQ	FSLEEQEQIL	SCLSIDSLSL	SDDSEKNPSK	ASQSSRDTLS	1080
1081	SGVHSSWSQA	EARSSSWNMV	LARGRPTDTP	SYFNGVKVQI	QSLNGEHLHI	REFHRVKVGD	1140
1141	IATGISSQIP	AAAFSLVTKD	GQPVRYDMEV	PDSGIDLQCT	LAPDGSFAWS	WRVKHGQLEN	1200
1201	RP						1260

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

NIK wt ¹ Amino Acid Sequence							
1	MAVMEMACPG	APGSAVGQQK	ELPKAKEKTP	PLGKKQSSVY	KLEAVEKSPV	FCGKWEILND	60
61	VITKGTAKEG	SEAGPAAISI	IAQAECENSQ	EFSPTFSERI	FIAGSKQYSQ	SESLDQIPNN	120
121	VAHATEGKMA	RVCWKGKRRS	KARKKRKKKS	SKSLAHAGVA	LAKPLPRTPPE	QESCTIPVQE	180
181	DESPLGAPYV	RNTPQFTKPL	KEPGLGQLCF	KQLGEGLRPA	LPRSELHCLI	SPLQCLNHVW	240
241	KLHHPQDGGP	LPLPTHFPFY	SRLPHFPFFH	PLQPWKPHPL	ESFLGKLACV	DSQKPLPDPH	300
301	LKSLACVDSP	KPLPGPHLEP	SCLSRGAHEK	FSVEEYLVHA	LQGSVSSGQA	HSLTSLAKTW	360
361	AARGSRREP	SPKTEDNEGV	LLTEKLPVD	YEYREEVHWA	THQLRLGRGS	FGEVHRMEDK	420
421	QTGFQCAVKK	VRLEVFRAEE	LMACAGLTSP	RIVPLYGAVR	EGPWVNI FME	LLEGGSLGQL	480
481	VKEQGCLPED	RALYYLGQAL	EGLEYLHSRR	ILHGDVKADN	VLLSSDGS	ALCDFGHAVC	540
541	LQPDGLGKSL	LTGDYIPGTE	THMAPEVVLG	RSCDAKVDVW	SSCCMMLHML	NGCHPWTQFF	600
601	RGPLCLKIAS	EPPPVEIPP	SCAPLTAQAI	QEGLRKEPIH	RVSAAELGK	VNRLQVGG	660
661	LKSPWRGEYK	EPRHPPPNQA	NYHQTLLHAQP	RELSPRAPGP	RPAEETTGRA	PKLQPPLPPE	720
721	PPEPNKSPPL	TLSKEESGMW	EPLPLSSLEP	APARNPSSPE	RKATVPEQEL	QQLEIELFLN	780
781	SLSQPFSL	EQILSCLSI	DSLSDSDSE	KNPSKASQSS	RDTLSSGVHS	WSSQAEARSS	840
841	SWNMVLARGR	PTDTPSYFNG	VKVQIQSLNG	EHLHIREFHR	VKVGDIATGI	SSQIPAAAFS	900
901	LVTKDGQPV	YDMEVPDSGI	DLQCTLAPDG	SFAWSWRVKH	GQLENRP		960

blue: NIK sequence expressed in recombinant protein

¹[NCBI/Protein](#) accession number NP_003945.2