

## IKK-beta

inhibitor of nuclear factor kappa B kinase subunit beta

Recombinant Human Active Protein Kinase

HGNC Symbol: IKBKB

Synonyms: IKK2; IKKB; NFKB1KB

Product No.: 0258-0000-1

Lot: 008

**Description:** Human IKK-beta, full length, amino acids M<sub>1</sub>-S<sub>756</sub> (as in [NCBI/Protein](#) entry NP\_001547.1), N-terminal GST-HIS<sub>6</sub> fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

**Product identity:** IKK-beta Lot 008, was confirmed as IKK-beta by mass spectroscopy LC-ESI-MS/MS

**Theoretical MW**<sub>Fusion Protein</sub>: 120,201 Da

**Expression host:** Sf9 insect cells

**Purification:** Immobilized Metal 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, 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:** 0.685 µg/µl  
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

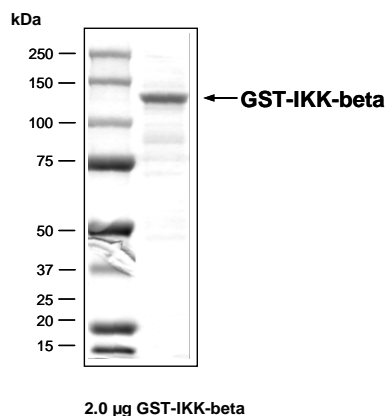
### Biochemical Parameters:

Specific kinase activity (P<sub>i</sub> transfer): 2 pmol/µg × min  
ATP-K<sub>M</sub>: 0.5 µM

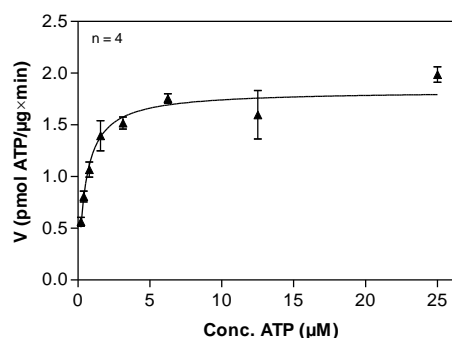
### Additional assay technology:

IKK-beta Lot 008 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

### IKK-beta Lot 008: Coomassie stain



### IKK-beta Lot 008: Determination of V<sub>max</sub> and K<sub>M</sub> value for ATP



### Determination of K<sub>M</sub> value & Specific activity:

- Assay conditions:
  - 60 mM HEPES-NaOH, pH 7.5
  - 3 mM MgCl<sub>2</sub>
  - 3 mM MnCl<sub>2</sub>
  - 3 µM Na-orthovanadate
  - 1.2 mM DTT
  - 50 µg/ml PEG<sub>20,000</sub>
  - ATP (variable)
  - Substrate: IKBa derived peptide 40 µg/ml
  - Kinase: 2 µg/ml
- Filter binding assay  
MSPH membrane (Millipore)

## IKK-beta

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GST-IKK-beta 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	MGARGRQCDG	YLQNSPLFMS	WSPSLTTQTC	GAWEMKERLG	300
301	TGGFGNVIRW	HNQETGEQIA	IKQCRQELSP	RNRERWCLEI	QIMRRLTHPN	VVAARDVPEG	360
361	MQNLAPNDLP	LLAMEYCOGG	DLRKYLNQFE	NCCGLREGAI	LTLSDIASA	LRYLHENRII	420
421	HRDLKPENIV	LQOGEORLIH	KIIDLGYAKE	LDQGSLSCTSF	VGTLOYLAPL	LLEQQKYTVT	480
481	VDYWSFGTLA	FECITGFRPF	LPNWQPQVWH	SKVRQKSEVD	IVVSEDNLGT	VKFSSSLPYP	540
541	NNLNSVLAER	LEKWLQMLM	WHPRQRGTD	TYGPNCGFKA	LDDILNLKLV	HILNMVTGTI	600
601	HTYPVTEDES	LQSLKARIQQ	DTGIPEEDQE	LLQEAGLALI	PDKPATQCIS	DGKLNIGHTL	660
661	DMNLVFLFD	SKITYETQIS	PRPQESVSC	ILQEPKRNLA	FFQLRKVWVG	VWHSIQTLKE	720
721	DCNRLQQQR	AAMNLLRNN	SCLSKMNSM	ASMSQQLKAK	LDFFKTSIQI	DLEKYSEQTE	780
781	FGITSDKLLL	AWREMEQAVE	LCGRENEVKL	LVERMMALQT	DIVDLQSPM	GRKQGGTLD	840
841	LEEQARELYR	RLREKPRDQR	TEGDSQEMVR	LLLQAIQSFE	KKVRVIYTQL	SKTVVCKQKA	900
901	LELLPKVEEV	VSLMNEDEKT	VVRLQEKRQK	ELWNLLKIAC	SKVRGPFVSGS	PDSMNASRLS	960
961	QPQQLMSQPS	TASNLSPEPA	KKSEELVAEA	HNLRTLLENA	IQDQTVREDD	SFTVTACALD	1020
1021	WSWLQTEEEE	HSCLEQASGK	GEFQHTGGRY				1080

1-218: GST **Red**: HIS6-tag **Pink**: Thrombin cleavage site **blue**: IKK-beta **boxed**: variation from RefSeq

IKK-beta wt <sup>1</sup> Amino Acid Sequence							
1	MSWSPSLTTQ	TCGAWEMKER	LGTGGFGNVI	RWHNQETGEQ	IAIKQCRQEL	SPNRERWCL	60
61	EIQIMRRLTH	PNVVAARDVP	EGMQNLAPND	LPLLAMEYCO	GGDLRKYLNQ	FENCCGLREG	120
121	AILTLLSDIA	SALRYLHENR	IIHRDLKPEN	IVLQOGEORL	IHKIIDLGYA	KELDQGSLSCT	180
181	SFVGTLOYLA	PELLEQQKYT	VTVDYWSFGT	LAFECITGFR	PFLPNWQPQV	WHSKVRQKSE	240
241	VDIVVSEDLN	GTVKFSSSLP	YPNNLNSVLA	ERLEKWLQML	LMWHPRQRGT	DPTYGPNCGCF	300
301	KALDDILNLK	LVHILNMVTG	TIHTYPVTEDE	ESLQSLKARI	QODTGIPEED	QELLQEAGLA	360
361	LIPDKPATQC	ISDGKLNESH	TLDMDLVFLF	DNSKITYETQ	ISPRPQESV	SCILQEPKRN	420
421	LAFQRLKRVW	GQVWHSIQTL	KEDCNRLQQG	QRAAMNLLR	NNSCLSKMKN	SMASMSQQLK	480
481	AKLDFFKTSI	QIDLEKYSEQ	TEFGITSDKL	LLAWREMEQA	VELCGRENEV	KLLVERMMAL	540
541	QTDIVDLQRS	PMGRKQGGTL	DDLEEQAREL	YRRLREKPRD	ORTEGDSQEM	VRLLQAIQS	600
601	FEKKVRVIYT	QLSKTVVCKQ	KALELLPKVE	EVVSLMNEDE	KTVVRLQEKR	QKELWNLLKI	660
661	ACSKVRGPVS	GSPDSMNASR	LSQPQQLMSQ	PSTASNLSPE	PAKKSEELVA	EAHNLCTLLE	720
721	NAIQDQTVREQ	DQSFTALDWS	WLQTEEEEHS	CLEQAS			780

**blue**: IKK-beta sequence expressed in recombinant protein **Red**: variant in recombinant protein

<sup>1</sup>[NCBI/Protein](#) accession number NP\_001547.1

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