

Certificate of Analysis

IKBKB (IKK beta), 10 µg

Recombinant Human Inhibitor of Kappa Light Chain Gene Enhancer in B Cells, Kinase Beta, GST-tagged

ThermoFisher
SCIENTIFIC

Part Number: PV3836

Lot Number: 2123403D

Immediate Storage: -80°C

Shipping Conditions: dry ice

5781 Van Allen Way

Carlsbad, CA 92008

Phone: 760.603.7200

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Description:

Recombinant Human Full-Length protein, GST-tagged, expressed in insect cells. No special measures were taken to activate this kinase.

Specific Activity:

73 nmoles of phosphate transferred to IKKtide peptide substrate (KKKKERLLDDRHSGLDSMKDEE) per minute per mg of total protein at 30°C. Activity determined at a final protein concentration of 8.33 µg/mL.

Concentration:

0.30 mg/mL total protein as measured using the Bradford protein assay with BSA as a standard.

Calculated **2,630 nM**.

Aliases:

IKK2, NFKB1KB, IKK Beta

Storage and Handling:

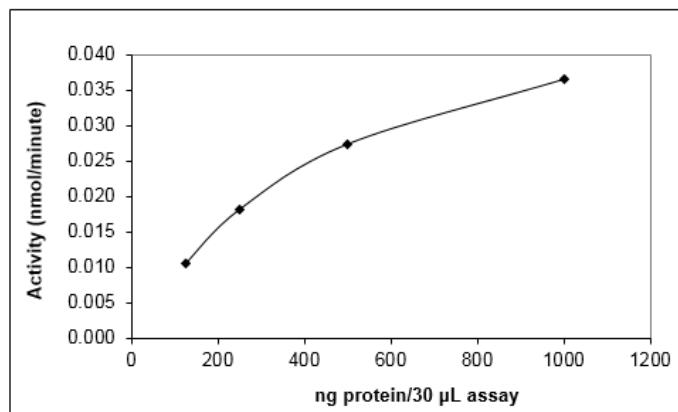
For maximum recovery please spin prior to use. Unless noted below, aliquots of the 5 µg, 10 µg and 20 µg sizes of kinase are not recommended as materials can be used in original packaging until exhausted. For larger sizes, the number of freeze/thaws may be reduced by preparing aliquots, aliquots below 20 µL are not recommended. **Please never store a kinase diluted.** If properly stored at -80°C, this product is guaranteed for 6 months from date of purchase.

Storage Buffer:

50 mM Tris (pH 7.5), 150 mM NaCl, 0.5 mM EDTA, 0.02% Triton® X-100, 2 mM DTT and 50% Glycerol.

QUALITY ASSURANCE

IKBKB (IKK beta) Activity Graph



Dilution Buffer:

20 mM Tris (pH 7.5), 0.02% Triton® X-100, 0.1 mg/mL BSA, 2 mM DTT, 0.5 mM Na₃VO₄ and 10% Glycerol.

Assay Conditions:

IKBKB (IKK beta) was pre-diluted in enzyme dilution buffer and assayed in 25 mM Tris (pH 7.5), 10 mM MgCl₂, 0.5 mM EGTA, 0.5 mM Na₃VO₄, 5 mM β-glycerophosphate, 2.5 mM DTT, 0.01% Triton® X-100, 200 µM ATP, 50 µg/mL IKKtide peptide substrate (KKKKERLLDDRHSGLDSMKDEE) and trace [³²P]-γ-ATP for 10 minutes at 30°C.

Gel Information for IKBKB (IKK beta)

Page Description: The SDS-PAGE and/or Native PAGE were run on 4-20% Tris-Glycine Novex™ gels (Catalog #: EC6025BOX).

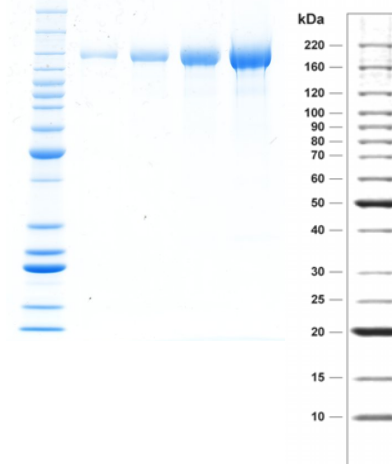
Lane 1: Invitrogen™ BenchMark™ Protein Ladder (Catalog #: 10747-012).

Lane 2: 0.5 µg IKBKB (IKK beta)

Lane 3: 1.0 µg IKBKB (IKK beta)

Lane 4: 2.5 µg IKBKB (IKK beta)

Lane 5: 5.0 µg IKBKB (IKK beta)



Purity:

95% as determined by a SDS-PAGE gel stained with SimplyBlue™ SafeStain.

Molecular Weight:

114.0 kDa. Calculated from the protein sequence(s).

Mass Spectrometry:

IKBKB (IKK beta) was subjected to proteolytic digest followed by mass spec analysis. The resulting MS/MS data verified IKBKB (IKK beta) identity by comparison against the amino acid sequence(s) of the recombinant protein.

Protein sequence alignment with reference sequence(s)

GenBank Accession Number: NP_001547

1	MAPILGYWKI	KGLVQPTRLL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	GDVKLTQDMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	GST TAG
1	MAPILGYWKI	KGLVQPTRLL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	GDVKLTQDMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	IVGN IKKB
1	M-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	NP_001547
101	DIRYGVSRIA	YSKDFETLKV	DFLSKLPEML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	KRIEAIQID	KYLKSSSKYIA	
101	DIRYGVSRIA	YSKDFETLKV	DFLSKLPEML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	KRIEAIQID	KYLKSSSKYIA	
2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
201	WPLQGWQATF	GGGDHPPKSD	LVPR								
201	WPLQGWQATF	GGGDHPPKSD	LVPRHNTSL	YKKAGTMSWS	PSLTQTTCGA	WEMKERLGTG	GFGNVIRWHN	QETGEQIAIK	QCRQELSPRN	RERWCLEIQI	
2	-----	-----	-----	-----SWS	PSLTQTTCGA	WEMKERLGTG	GFGNVIRWHN	QETGEQIAIK	QCRQELSPRN	RERWCLEIQI	
224											
301	MRRLTHPNVV	AARDVPEGMQ	NLAPNDLPLL	AMEYCQGGDL	RKYNLQFENC	CGLREGAILT	LLSDIASALR	YLHENRIIHR	DLKPENIVLQ	QGEQRLIHKI	
65	MRRLTHPNVV	AARDVPEGMQ	NLAPNDLPLL	AMEYCQGGDL	RKYNLQFENC	CGLREGAILT	LLSDIASALR	YLHENRIIHR	DLKPENIVLQ	QGEQRLIHKI	
224											
401	IDLGYAKELD	QGSLECTSFVG	TLQYLAPELL	EQQKYTVTVD	YWSFGTLAFE	CITGFRPFLP	NWQPVQWHSK	VRQKSEVDIV	VSEDLNGTVK	FSSSLPYPNN	
165	IDLGYAKELD	QGSLECTSFVG	TLQYLAPELL	EQQKYTVTVD	YWSFGTLAFE	CITGFRPFLP	NWQPVQWHSK	VRQKSEVDIV	VSEDLNGTVK	FSSSLPYPNN	
224											
501	LNSVLAERLE	KWLQLMLMWH	PRQRGTDPTY	GPNGCFKALD	DILNLKLVHI	LMNVTGTIHT	YPVTEDESQ	SLKARIQDQT	GIPEEDQELL	QEAGLALIPD	
265	LNSVLAERLE	KWLQLMLMWH	PRQRGTDPTY	GPNGCFKALD	DILNLKLVHI	LMNVTGTIHT	YPVTEDESQ	SLKARIQDQT	GIPEEDQELL	QEAGLALIPD	
224											
601	KPATQCISDG	KLNEGHTLDM	DLVFLFDNSK	ITYETQISPR	POPESVSCIL	QEPKRNLAFF	QLRKVWGQVW	HSIQTLKEDC	NRLQQGQRAA	MMNLLRNNSC	
365	KPATQCISDG	KLNEGHTLDM	DLVFLFDNSK	ITYETQISPR	POPESVSCIL	QEPKRNLAFF	QLRKVWGQVW	HSIQTLKEDC	NRLQQGQRAA	MMNLLRNNSC	
224											
701	LSKMKNMAS	MSQQLKAKLD	FFKTSIQIDL	EKYSEQTEFG	ITSDKLLLAW	REMEQAVELC	GRENEVKLLV	ERMALQTDI	VDLQSPMGR	KQGGTLDDLE	
465	LSKMKNMAS	MSQQLKAKLD	FFKTSIQIDL	EKYSEQTEFG	ITSDKLLLAW	REMEQAVELC	GRENEVKLLV	ERMALQTDI	VDLQSPMGR	KQGGTLDDLE	
224											
801	EQARELYRRL	REKPRDQRT	GDSQEMVRL	LQAIQSFEKK	VRVIYTLQSK	TVVCKQKALE	LLPKVEEVVS	LMNEDEKTVV	RLQEKRQKEL	WNLLKIACSK	
565	EQARELYRRL	REKPRDQRT	GDSQEMVRL	LQAIQSFEKK	VRVIYTLQSK	TVVCKQKALE	LLPKVEEVVS	LMNEDEKTVV	RLQEKRQKEL	WNLLKIACSK	
224											
901	VRGPVSGSPD	SMNASRLSQP	QQLMSQPSTA	SNSLPEPAKK	SEELVAEAHN	LCTLLENAIQ	DTVREQDQSF	TALDWSWLQT	EEEEHSCLEQ	AS	
665	VRGPVSGSPD	SMNASRLSQP	QQLMSQPSTA	SNSLPEPAKK	SEELVAEAHN	LCTLLENAIQ	DTVREQDQSF	TALDWSWLQT	EEEEHSCLEQ	AS	

* highlighted residues denote differences from the reference protein sequence(s).

Anita Targosz

Anita Targosz, Associate Director

Date: 18/Jul/2019

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