

IKBKB Protein, Human, Recombinant (E. coli, His)

General Information

Synonyms:	I-kappa-B-kinase beta;Ikbkb;IKK-B;Serine/threonine protein kinase IKBKB;IKKB;Nuclear factor NF-kappa-B inhibitor kinase beta (NFKB1KB);I-kappa-B kinase 2 (IKK-2;IKK2);IKK-beta; Inhibitor of nuclear factor kappa-B kinase subunit beta
Protein Construction:	1-756 aa
Species:	Human
Expression Host:	E. coli
Accession:	O14920
Molecular Weight:	92.5 kDa (predicted)
AA Sequence:	MSWSPSLTTQTCGAWEMKERLGTGGFGNVIRWHNQETGEQIAIKQCRQELSPRNRERWCLEIQIMRRLTHPN VVAARDVPEGMQNLAPNDLPLLAMEYCGGGDLRKYLNQFENCCGLREGAILTLLSDIASALRYLHENRIIHRD LKPENIVLQQGEQRLIHKIIDLGYAKELDQGSLSFVGTGLQYLAPELLEQQKYTVTVDYWSFGTLAFECITGFR PFLPNWQPVQWHSKVRQKSEVDIVVSEDLNGTVKFSSSLPYPNNLNSVLAERLEKWLQLMLMWHPRQRGT DPTYGPNGCFKALDDILNLKLVHILNMVTGTIHTYPTVEDESLQSLKARIQQDTGIPEEDQELLQEAGLALIPDK PATQCISDGLNEGHTLDMDLVFLFDNSKITYETQISPRPQPESVSCILQEPKRNLAFFQLRKVWGQVWHSIQT LKEDCNRLQQGQRAAMNLLRNNSCLSKMKNSMASMSQQLKAKLDFFKTSIQIDLEKYSEQTEFGITSDKLL LAWREMEQAVELCGRENEVKLLVERMMALQTDIVDLQRSPMGRKQGGTLDLEEQARELYRRLREKPRDQR TEGDSQEMVRLLLQAIQSFEKKVRIYQLSKTVVCKQKALELLPKVEEVVSLMNEDEKTVVRLQEKRQKELW NLLKIACSKVRGPVSGSPDSMNASRLSQPGQLMSQPSTASNSLPEPAKKSEELVAEAHNLCTLLENAIQDQTVR EQDQSFTALDWSWLQTEEEHSCLEQAS

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 85% as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Tris-based buffer, 50% glycerol

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Serine kinase that plays an essential role in the NF-kappa-B signaling pathway which is activated by multiple stimuli such as inflammatory cytokines, bacterial or viral products, DNA damages or other cellular stresses. Acts as part of the canonical IKK complex in the conventional pathway of NF-kappa-B activation. Phosphorylates inhibitors of NF-kappa-B on 2 critical serine residues. These modifications allow polyubiquitination of the inhibitors and subsequent degradation by the proteasome. In turn, free NF-kappa-B is translocated into the nucleus and activates the transcription of hundreds of genes involved in immune response, growth control, or protection against apoptosis. In addition to the NF-kappa-B inhibitors, phosphorylates several other components of the signaling pathway including NEMO/IKBKG, NF-kappa-B subunits RELA and NFKB1, as well as IKK-related kinases TBK1 and IKBKE. IKK-related kinase phosphorylations may prevent the overproduction of inflammatory mediators since they exert a negative regulation on canonical IKKs. Phosphorylates FOXO3, mediating the TNF-dependent inactivation of this pro-apoptotic transcription factor. Also phosphorylates other substrates including NCOA3, BCL10 and IRS1. Within the nucleus, acts as an adapter protein for NFKBIA degradation in UV-induced NF-kappa-B activation. Phosphorylates RIPK1 at 'Ser-25' which represses its kinase activity and consequently prevents TNF-mediated RIPK1-dependent cell death. Phosphorylates the C-terminus of IRF5, stimulating IRF5 homodimerization and translocation into the nucleus.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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