

Product Datasheet

IKBKB Protein, Human, Recombinant (E. coli, His) (orb1978383)

Description

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.

Storage

-20°C

Tag

N-6xHis

Note

For research use only

Application notes

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

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Protein Sequence

MSWSPSLTTQTCGAWEMKERLGTGGFGNVIRWHNQETGEQIAIKQCRQELSPRNRERWC
LEIQIMRRLTHPNVVAARDVPEGMQNLAPNDLPLLAMEYCQGGDLRKYLNQFENCCGLRE
GAILTLLSDIASALRYLHENRIIHRDLKPENIVLQQGEQRLIHKIIDLGYAKELDQGSLECTSFVG
TLQYLAPELLEQQKYTVTVDYWSFGTLAFECITGFRPFLPNWQPVQVHWSKVRQKSEVDIVV
SEDLNGTVKFSSSLPYPNNLNSVLAERLEKWLQLMLMWHPRQRGTDPYGPNGCFKALDD
ILNLKLVHILNMVTGTIHTYPVTEDESLQSLKARIQQDTGIPEEDQELLQEAGLALIPDKPATQ
CISDGKLNEGHTLDMDLVFLFDNSKITYETQISPRQPESVSCILQEPKRNLAFFQLRKVWG
QVWHSIQTLKEDCNRLQQGQRAAMNLLRNNSCLSKMKNSMASMSQQLKAKLDDFFKTSI
QIDLEKYSEQTEFGITSDKLLLAWREMEQAVELCGRENEVKLLVERMMALQTDIVDLQRSP
MGRKQGGTLDDLEEQARELYRRLREKPRDQRTEGDSQEMVRLLLQAIQSFEKKVRVIYTQL
SKTVVCKQKALELLPKVEEVVSLMNEDEKTVVRLQEKQKELWNLLKIACSKVRGPVSGSP
DSMNASRLSQPGQLMSQPSTASNSLPEPAKKSEELVAEAHNLCTLLENAIQDTVREQDQSF
TALDWSWLQTEEEEHSCLEQAS

Purity

98.00%

MW

92.5 kDa (predicted)

Uniprot ID**O14920****Expiration Date**

6 months from date of receipt.

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