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IKKB Antibody (C-term S682) Blocking Peptide

Synthetic peptide
Catalog # BP19108b

Specification

IKKB Antibody (C-term S682) Blocking Peptide - Product Information

Primary Accession O14920

IKKB Antibody (C-term S682) Blocking Peptide - Additional Information

Gene ID 3551

Other Names
Inhibitor of nuclear factor kappa-B kinase subunit beta, I-kappa-B-kinase beta, IKK-B, IKK-beta, IkBKB, I-kappa-B kinase 2, IKK2, Nuclear factor NF-kappa-B inhibitor kinase beta, NFKBIKB, IKBKB, IKKB

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

IKKB Antibody (C-term S682) Blocking Peptide - Protein Information

Name IKBKB

Synonyms IKKB

Function
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 (PubMed:20434986, PubMed:20797629, PubMed:21138416, PubMed:9346484, PubMed:30337470). Acts as a part of the canonical IKK complex in the conventional pathway of NF-kappa-B activation (PubMed:9346484). Phosphorylates inhibitors of NF-kappa-B on 2 critical serine residues (PubMed:9346484, PubMed:20434986, PubMed:20797629, PubMed:<a href="http://www.uniprot.org/citations/21138416"

target="_blank">21138416). These modifications allow polyubiquitination of the inhibitors and subsequent degradation by the proteasome (PubMed:9346484, PubMed:20434986, PubMed:20797629, PubMed:21138416). 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 (PubMed:9346484, PubMed:20434986, PubMed:20797629, PubMed:21138416). 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 (PubMed:11297557, PubMed:14673179, PubMed:20410276, PubMed:21138416). IKK-related kinase phosphorylations may prevent the overproduction of inflammatory mediators since they exert a negative regulation on canonical IKKs (PubMed:11297557, PubMed:20410276, PubMed:21138416). Phosphorylates FOXO3, mediating the TNF-dependent inactivation of this pro-apoptotic transcription factor (PubMed:15084260). Also phosphorylates other substrates including NAA10, NCOA3, BCL10 and IRS1 (PubMed:19716809, PubMed:17213322). Phosphorylates RIPK1 at 'Ser-25' which represses its kinase activity and consequently prevents TNF- mediated RIPK1-dependent cell death (By similarity). Phosphorylates the C-terminus of IRF5, stimulating IRF5 homodimerization and translocation into the nucleus (PubMed:25326418).

Cellular Location
Cytoplasm. Nucleus. Membrane raft. Note=Colocalized with DPP4 in membrane rafts.

Tissue Location
Highly expressed in heart, placenta, skeletal muscle, kidney, pancreas, spleen, thymus, prostate, testis and peripheral blood

IKKB Antibody (C-term S682) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

IKKB Antibody (C-term S682) Blocking Peptide - Images

IKKB Antibody (C-term S682) Blocking Peptide - Background

NFKB1 (MIM 164011) or NFKB2 (MIM 164012) is bound to REL(MIM 164910), RELA (MIM 164014), or RELB (MIM 604758) to form theNFKB complex. The NFKB complex is inhibited by I-kappa-B proteins(NFKBIA, MIM 164008, or NFKBIB, MIM 604495), which inactivateNF-kappa-B by trapping it in the cytoplasm. Phosphorylation ofserine residues on the I-kappa-B proteins by kinases (IKBKA, MIM600664, or IKBKB) marks them for destruction via the ubiquitinationpathway, thereby allowing activation of the NF-kappa-B complex.Activated NFKB complex translocates into the nucleus and

binds DNAat kappa-B-binding motifs such as 5-prime GGGRNNYYCC 3-prime or5-prime HGGARNYYCC 3-prime (where H is A, C, or T; R is an A or Gpurine; and Y is a C or T pyrimidine).

IKKB Antibody (C-term S682) Blocking Peptide - References

Yatherajam, G., et al. J. Immunol. 185(5):2665-2669(2010)Kenneth, N.S., et al. EMBO J. 29(17):2966-2978(2010)Zhao, M., et al. J. Biol. Chem. 285(32):24372-24380(2010)Niida, M., et al. Mol. Immunol. 47(14):2378-2387(2010)Schuurhof, A., et al. Pediatr. Pulmonol. 45(6):608-613(2010)