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mouse IKKB Antibody (C-term S692) Blocking Peptide

Synthetic peptide
Catalog # BP19116b

Specification

mouse IKKB Antibody (C-term S692) Blocking Peptide - Product Information

Primary Accession O88351

mouse IKKB Antibody (C-term S692) Blocking Peptide - Additional Information

Gene ID 16150

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.

mouse IKKB Antibody (C-term S692) 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 (By similarity). Acts as a part of the canonical IKK complex in the conventional pathway of NF-kappa-B activation (By similarity). Phosphorylates inhibitors of NF-kappa-B on 2 critical serine residues (By similarity). These modifications allow polyubiquitination of the inhibitors and subsequent degradation by the proteasome (By similarity). 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 (By similarity). 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 (By similarity). IKK-related kinase phosphorylations may prevent the overproduction of inflammatory mediators since they exert a negative regulation on canonical IKKs (By similarity). Phosphorylates FOXO3, mediating the TNF-dependent inactivation of this pro-apoptotic transcription factor (By similarity). Also phosphorylates other substrates

including NAA10, NCOA3, BCL10 and IRS1 (By similarity). Phosphorylates RIPK1 at 'Ser-25' which represses its kinase activity and consequently prevents TNF- mediated RIPK1-dependent cell death (PubMed:30988283). Phosphorylates the C-terminus of IRF5, stimulating IRF5 homodimerization and translocation into the nucleus (PubMed:25326420). Following bacterial lipopolysaccharide (LPS)-induced TLR4 endocytosis, phosphorylates STAT1 at 'Thr-748' which restricts interferon signaling and anti-inflammatory responses and promotes innate inflammatory responses (PubMed:38621137). IKBKB-mediated phosphorylation of STAT1 at 'Thr-748' promotes binding of STAT1 to the ARID5A promoter, resulting in transcriptional activation of ARID5A and subsequent ARID5A-mediated stabilization of IL6 (By similarity). It also promotes binding of STAT1 to the IL12B promoter and activation of IL12B transcription (By similarity).

Cellular Location
Cytoplasm {ECO:0000250|UniProtKB:O14920}. Nucleus {ECO:0000250|UniProtKB:O14920}. Membrane raft {ECO:0000250|UniProtKB:O14920}. Note=Colocalized with DPP4 in membrane rafts. {ECO:0000250|UniProtKB:O14920}

Tissue Location
Detected in heart (at protein level) (PubMed:23090968). Expressed in liver, kidney and spleen

mouse IKKB Antibody (C-term S692) Blocking Peptide - Protocols

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

- Blocking Peptides

mouse IKKB Antibody (C-term S692) Blocking Peptide - Images

mouse IKKB Antibody (C-term S692) Blocking Peptide - Background

IKKB acts as part of the IKK complex in the conventional pathway of NF-kappa-B activation and phosphorylates inhibitors of NF-kappa-B thus leading to the dissociation of the inhibitor/NF-kappa-B complex and ultimately the degradation of the inhibitor. Also phosphorylates NCOA3 (By similarity).

mouse IKKB Antibody (C-term S692) Blocking Peptide - References

Busuttil, V., et al. Proc. Natl. Acad. Sci. U.S.A. 107(42):18061-18066(2010)Kenneth, N.S., et al. EMBO J. 29(17):2966-2978(2010)Tsuchiya, Y., et al. Mol. Cell 39(4):570-582(2010)Farlik, M., et al. Immunity 33(1):25-34(2010)Dong, X., et al. PLoS Pathog. 6 (7), E1001001 (2010) :