

Phospho-IKKb(Y199) Antibody Blocking peptide
Synthetic peptide
Catalog # BP3127a**Specification**

Phospho-IKKb(Y199) Antibody Blocking peptide - Product InformationPrimary Accession [O14920](#)**Phospho-IKKb(Y199) Antibody 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, NFKB1KB, IKBKB, IKKB

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP3127a](/product/products/AP3127a) was selected from the region of human Phospho-IKKb-Y199. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

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.

Phospho-IKKb(Y199) Antibody 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](http://www.uniprot.org/citations/20434986), PubMed: [20797629](http://www.uniprot.org/citations/20797629), PubMed: [21138416](http://www.uniprot.org/citations/21138416), PubMed: [9346484](http://www.uniprot.org/citations/9346484), PubMed: [30337470](http://www.uniprot.org/citations/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: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 IKKε (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

Phospho-IKKb(Y199) Antibody Blocking peptide - Protocols

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

- [Blocking Peptides](#)

Phospho-IKKb(Y199) Antibody Blocking peptide - Images

Phospho-IKKb(Y199) Antibody Blocking peptide - Background

NFKB1 or NFKB2 is bound to REL, RELA, or RELB to form the NFKB complex. The NFKB complex is inhibited by I-kappa-B proteins (NFKBIA or NFKBIB), which inactivate NF-kappa-B by trapping it in the cytoplasm. Phosphorylation of serine residues on the inhibitory I-kappa-B proteins by kinases (IKKa or IKKb) leads to the dissociation of the inhibitor/NF-kappa-B complex and marks the inhibitors for destruction via the ubiquitination pathway, thereby allowing activation of the NF-kappa-B complex. Activated NFKB complex translocates into the nucleus and binds DNA at kappa-B-binding motifs.

Phospho-IKKb(Y199) Antibody Blocking peptide - References

Tomasoni, S., et al., Transplantation 79(9):1056-1061 (2005).Lappas, M., et al., Endocrinology 146(3):1491-1497 (2005).Carcamo, J.M., et al., Mol. Cell. Biol. 24(15):6645-6652 (2004).May, M.J., et al., J. Biol. Chem. 279(44):45528-45539 (2004).Ea, C.K., et al., Proc. Natl. Acad. Sci. U.S.A. 101(43):15318-15323 (2004).