

Phospho-IKKb(Y199) Antibody
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3127a

Specification

Phospho-IKKb(Y199) Antibody - Product Information

Application	WB,E
Primary Accession	O14920
Other Accession	O9QY78 , O88351 , O95KV0
Reactivity	Human
Predicted	Bovine, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	86564

Phospho-IKKb(Y199) Antibody - 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, NFKBIB, IKBKB, IKKB

Target/Specificity

This IKKb Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding Y199 of human IKKb.

Dilution

WB~~1:1000

E~~Use at an assay dependent concentration.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Phospho-IKKb(Y199) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Phospho-IKKb(Y199) Antibody - 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:[30337470](#), PubMed:[9346484](#)). 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:[20434986](#), PubMed:[20797629](#), PubMed:[21138416](#), PubMed:[9346484](#)). These modifications allow polyubiquitination of the inhibitors and subsequent degradation by the proteasome (PubMed:[20434986](#), PubMed:[20797629](#), PubMed:[21138416](#), PubMed:[9346484](#)). 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:[20434986](#), PubMed:[20797629](#), PubMed:[21138416](#), PubMed:[9346484](#)). 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:[17213322](#), PubMed:[19716809](#)). 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](#)). Following bacterial lipopolysaccharide (LPS)-induced TLR4 endocytosis, phosphorylates STAT1 at 'Thr-749' which restricts interferon signaling and anti-inflammatory responses and promotes innate inflammatory responses (PubMed:[38621137](#)). IKKB-mediated phosphorylation of STAT1 at 'Thr-749' promotes binding of STAT1 to the ARID5A promoter, resulting in transcriptional activation of ARID5A and subsequent ARID5A-mediated stabilization of IL6 (PubMed:[32209697](#)). It also promotes binding of STAT1 to the IL12B promoter and activation of IL12B transcription (PubMed:[32209697](#)).

Cellular Location

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

Tissue Location

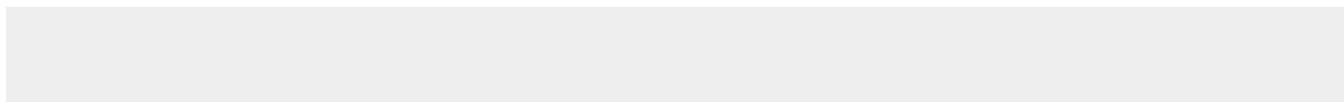
Highly expressed in heart, placenta, skeletal muscle, kidney, pancreas, spleen, thymus, prostate, testis and peripheral blood

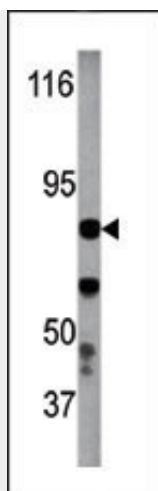
Phospho-IKKb(Y199) Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Phospho-IKKb(Y199) Antibody - Images





The anti-Phospho-IKKb-Y199 Pab (Cat. #AP3127a) is used in Western blot to detect Phospho-IKKb-Y199 in Y79 tissue lysate

Phospho-IKKb(Y199) Antibody - 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 - 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).

Phospho-IKKb(Y199) Antibody - Citations

- [Synthetic curcumin analog UBS109 inhibits the growth of head and neck squamous cell carcinoma xenografts.](#)