

**Anti-IKK beta IKBKB Rabbit Monoclonal Antibody**  
Catalog # ABO13927

**Specification**

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**Anti-IKK beta IKBKB Rabbit Monoclonal Antibody - Product Information**

Application	WB, IP
Primary Accession	<a href="#">O14920</a>
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Human, Mouse
Clonality	Monoclonal
Format	Liquid

**Description**

Anti-IKK beta IKBKB Rabbit Monoclonal Antibody . Tested in WB, IP applications. This antibody reacts with Human, Mouse.

**Anti-IKK beta IKBKB Rabbit Monoclonal 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, 2.7.11.10, I-kappa-B kinase 2, IKK-2, IKK2, Nuclear factor NF-kappa-B inhibitor kinase beta, NFKB1KB, Serine/threonine protein kinase IKBKB, 2.7.11.1, IKBKB, IKKB

**Calculated MW**

86564 MW KDa

**Application Details**

WB 1:500-1:2000<br>IP 1:50

**Subcellular Localization**

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

**Tissue Specificity**

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

**Contents**

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

**Immunogen**

A synthesized peptide derived from human IKK beta

**Purification**

Affinity-chromatography

Storage

**Store at -20°C for one year. For short term**

storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

## Anti-IKK beta IKBKB Rabbit Monoclonal 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: <a href="http://www.uniprot.org/citations/20434986" target="\_blank">20434986</a>, PubMed: <a href="http://www.uniprot.org/citations/20797629" target="\_blank">20797629</a>, PubMed: <a href="http://www.uniprot.org/citations/21138416" target="\_blank">21138416</a>, PubMed: <a href="http://www.uniprot.org/citations/30337470" target="\_blank">30337470</a>, PubMed: <a href="http://www.uniprot.org/citations/9346484" target="\_blank">9346484</a>). Acts as a part of the canonical IKK complex in the conventional pathway of NF-kappa-B activation (PubMed: <a href="http://www.uniprot.org/citations/9346484" target="\_blank">9346484</a>). Phosphorylates inhibitors of NF-kappa-B on 2 critical serine residues (PubMed: <a href="http://www.uniprot.org/citations/20434986" target="\_blank">20434986</a>, PubMed: <a href="http://www.uniprot.org/citations/20797629" target="\_blank">20797629</a>, PubMed: <a href="http://www.uniprot.org/citations/21138416" target="\_blank">21138416</a>, PubMed: <a href="http://www.uniprot.org/citations/9346484" target="\_blank">9346484</a>). These modifications allow polyubiquitination of the inhibitors and subsequent degradation by the proteasome (PubMed: <a href="http://www.uniprot.org/citations/20434986" target="\_blank">20434986</a>, PubMed: <a href="http://www.uniprot.org/citations/20797629" target="\_blank">20797629</a>, PubMed: <a href="http://www.uniprot.org/citations/21138416" target="\_blank">21138416</a>, PubMed: <a href="http://www.uniprot.org/citations/9346484" target="\_blank">9346484</a>). 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: <a href="http://www.uniprot.org/citations/20434986" target="\_blank">20434986</a>, PubMed: <a href="http://www.uniprot.org/citations/20797629" target="\_blank">20797629</a>, PubMed: <a href="http://www.uniprot.org/citations/21138416" target="\_blank">21138416</a>, PubMed: <a href="http://www.uniprot.org/citations/9346484" target="\_blank">9346484</a>). 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: <a href="http://www.uniprot.org/citations/11297557" target="\_blank">11297557</a>, PubMed: <a href="http://www.uniprot.org/citations/14673179" target="\_blank">14673179</a>, PubMed: <a href="http://www.uniprot.org/citations/20410276" target="\_blank">20410276</a>, PubMed: <a href="http://www.uniprot.org/citations/21138416" target="\_blank">21138416</a>). IKK-related kinase phosphorylations may prevent the overproduction of inflammatory mediators since they exert a negative regulation on canonical IKKs (PubMed: <a href="http://www.uniprot.org/citations/11297557" target="\_blank">11297557</a>, PubMed: <a href="http://www.uniprot.org/citations/20410276" target="\_blank">20410276</a>, PubMed: <a href="http://www.uniprot.org/citations/21138416" target="\_blank">21138416</a>). Phosphorylates FOXO3, mediating the TNF-dependent inactivation of this pro-apoptotic transcription factor (PubMed: <a href="http://www.uniprot.org/citations/15084260" target="\_blank">15084260</a>). Also phosphorylates other substrates including NAA10, NCOA3, BCL10 and IRS1 (PubMed: <a href="http://www.uniprot.org/citations/17213322" target="\_blank">17213322</a>, PubMed: <a href="http://www.uniprot.org/citations/19716809" target="\_blank">19716809</a>). 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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/38621137)). IKBKB-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](http://www.uniprot.org/citations/32209697)). It also promotes binding of STAT1 to the IL12B promoter and activation of IL12B transcription (PubMed: [32209697](http://www.uniprot.org/citations/32209697)).

#### Cellular Location

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

#### Tissue Location

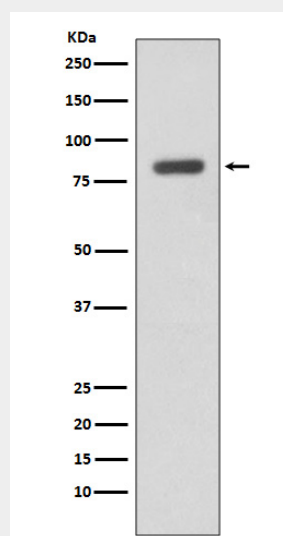
Highly expressed in heart, placenta, skeletal muscle, kidney, pancreas, spleen, thymus, prostate, testis and peripheral blood

### Anti-IKK beta IKBKB Rabbit Monoclonal 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](#)

### Anti-IKK beta IKBKB Rabbit Monoclonal Antibody - Images



Western blot analysis of IKK beta expression in Daudi cell lysate.