

**IKK beta Antibody**  
Rabbit mAb  
Catalog # AP91038

## Specification

---

### IKK beta Antibody - Product Information

Application	<b>WB, IHC, ICC</b>
Primary Accession	<a href="#">O14920</a>
Reactivity	<b>Rat</b>
Clonality	<b>Monoclonal</b>
<b>Other Names</b>	
IKK-B; IKK-beta; IKK2; IKKB; IkbKB; NFKBIKB; kinase IKK-beta;	
Isotype	<b>Rabbit IgG</b>
Host	<b>Rabbit</b>
Calculated MW	<b>86564 Da</b>

### IKK beta Antibody - Additional Information

Purification	<b>Affinity-chromatography</b>
Immunogen	<b>A synthesized peptide derived from human IKK beta</b>
Description	<b>IKK-beta is a kinase of the IKK family. 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. Preferentially found as a heterodimer with IKK-alpha but also as an homodimer.</b>
Storage Condition and Buffer	<b>Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.</b>

### IKK beta 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](http://www.uniprot.org/citations/20434986), PubMed: [20797629](http://www.uniprot.org/citations/20797629), PubMed: [21138416](http://www.uniprot.org/citations/21138416), PubMed: [30337470](http://www.uniprot.org/citations/30337470), PubMed: [9346484](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 IKKBE (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:<a href="http://www.uniprot.org/citations/25326418" target="\_blank">25326418</a>). 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:<a href="http://www.uniprot.org/citations/38621137" target="\_blank">38621137</a>). 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:<a href="http://www.uniprot.org/citations/32209697" target="\_blank">32209697</a>). It also promotes binding of STAT1 to the IL12B promoter and activation of IL12B transcription (PubMed:<a href="http://www.uniprot.org/citations/32209697" target="\_blank">32209697</a>).

### Cellular Location

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

### Tissue Location

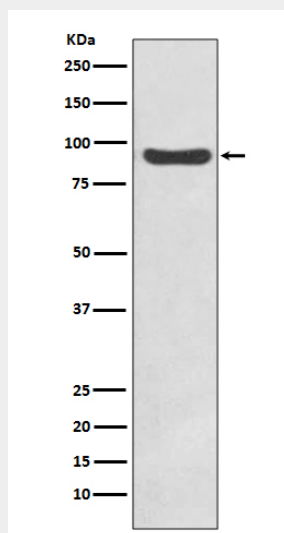
Highly expressed in heart, placenta, skeletal muscle, kidney, pancreas, spleen, thymus, prostate, testis and peripheral blood

## IKK beta 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](#)

## IKK beta Antibody - Images



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