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Anti-IKK beta IKBKB Rabbit Monoclonal Antibody

Catalog # ABO13941

Specification

Anti-IKK beta IKBKB Rabbit Monoclonal Antibody - Product Information

Application	**WB, IHC, IF, ICC**
Primary Accession	O14920
Host	**Rabbit**
Isotype	**Rabbit IgG**
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Format	**Liquid**

Description
Anti-IKK beta IKBKB Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF applications. This antibody reacts with Human, Mouse, Rat.

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, NFKBIKB, Serine/threonine protein kinase IKBKB, 2.7.11.1, IKBKB, IKKB

Calculated MW
86564 MW KDa

Application Details
WB 1:500-1:2000
IHC 1:50-1:200
ICC/IF 1:50-1:200

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: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). 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). 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.

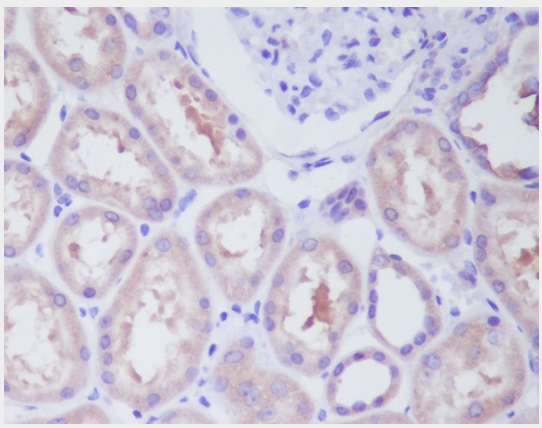
Tissue Location
Highly expressed in heart, placenta, skeletal muscle, kidney, pancreas, spleen, thymus, prostate, testis and peripheral blood

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 Cytomety
- Cell Culture

Anti-IKK beta IKBKB Rabbit Monoclonal Antibody - Images



Immunohistochemical analysis of paraffin-embedded human kidney, using IKK beta Antibody.

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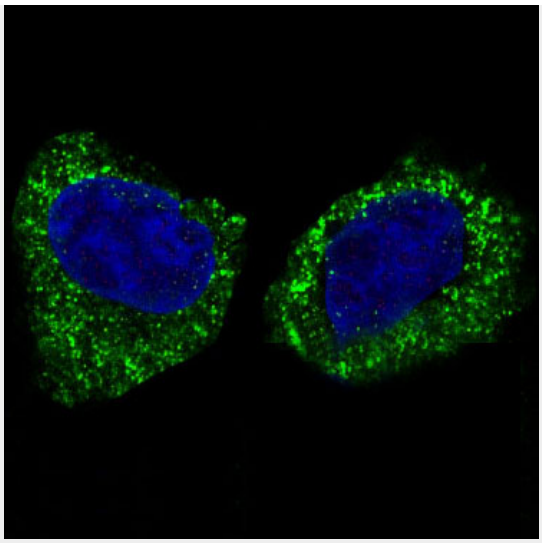

Immunofluorescent analysis of HeLa cells, using IKK beta Antibody.

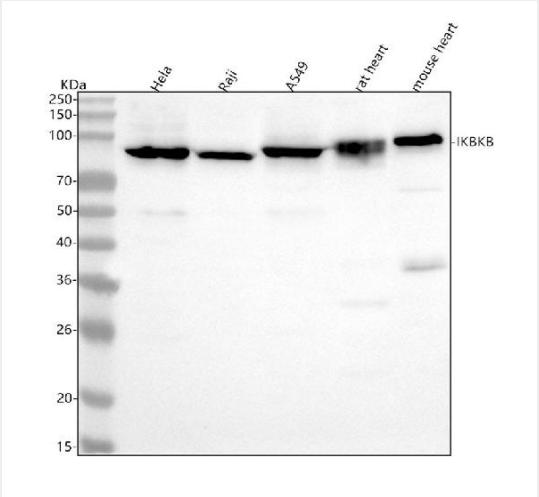

Figure 1. Western blot analysis of IKBKB using anti-IKBKB antibody (M00118).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human Hela whole cell lysates,
Lane 2: human Raji whole cell lysates,
Lane 3: human A549 whole cell lysates,
Lane 4: rat heart tissue lysates,
Lane 5: mouse heart tissue lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-IKBKB antigen affinity purified monoclonal antibody (Catalog # M00118) at 1:500 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for IKBKB at approximately 87 kDa. The expected band size for IKBKB is at 87 kDa.