10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# Anti-IKK beta IKBKB Rabbit Monoclonal Antibody

Catalog # ABO13927

## Product Information

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| **Application** | WB, IP |
| **Primary Accession** | O14920 |
| **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. |

## Additional Information

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| **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 |
| **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. |
| **Source** | Eukaryota |
| **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. |
| **Clone Names** | Clone: FOI-9 |
| **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. |

## Protein Information

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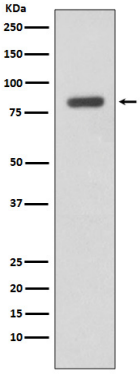
| **Name** | IKBKB |
| **Synonyms** | IKKB |
| **Function** | Serine kinase that plays an essential role in the NF-kappa-B signaling pathway which is activated by multiple stimuli such as inflammatory cytokines, bacterial or viral products, DNA damages or other cellular stresses (PubMed:20434986, PubMed:20797629, 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 |

## Images

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

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