

ARG57596 anti-IKK beta antibody [62AT216]

Package: 100 µl
Store at: -20°C

Summary

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| Product Description | Mouse Monoclonal antibody recognizes IKK beta |
| Tested Reactivity | Hu |
| Tested Application | WB |
| Host | Mouse |
| Clonality | Monoclonal |
| Clone | 62AT216 |
| Isotype | IgG |
| Target Name | IKK beta |
| Species | Human |
| Immunogen | Purified His-tagged recombinant full length Human IKK beta. |
| Conjugation | Un-conjugated |
| Alternate Names | Inhibitor of nuclear factor kappa-B kinase subunit beta; I-kappa-B kinase 2; IKK2; Nuclear factor NF-kappa-B inhibitor kinase beta; IKK-beta; NFKBKB; IKK-B; IkbKB; IKKB; IMD15; EC 2.7.11.10; I-kappa-B-kinase beta |

Application Instructions

| Application table | <table> <tr> <th>Application</th><th>Dilution</th></tr> <tr> <td>WB</td><td>1:100 - 1:500</td></tr> </table> | Application | Dilution | WB | 1:100 - 1:500 |
|-------------------|--|-------------|----------|----|---------------|
| Application | Dilution | | | | |
| WB | 1:100 - 1:500 | | | | |
| Application Note | * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist. | | | | |
| Positive Control | HeLa | | | | |

Properties

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| Form | Liquid |
| Purification | Purification with Protein G. |
| Buffer | PBS and 0.09% (W/V) Sodium azide. |
| Preservative | 0.09% (W/V) Sodium azide |
| Storage instruction | For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use. |
| Note | For laboratory research only, not for drug, diagnostic or other use. |

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| Gene Symbol | IKKB |
| Gene Full Name | inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase beta |
| Background | The protein encoded by this gene phosphorylates the inhibitor in the inhibitor/NF-kappa-B complex, causing dissociation of the inhibitor and activation of NF-kappa-B. The encoded protein itself is found in a complex of proteins. Several transcript variants, some protein-coding and some not, have been found for this gene. [provided by RefSeq, Sep 2011] |
| 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. Acts as part of the canonical IKK complex in the conventional pathway of NF-kappa-B activation and phosphorylates inhibitors of NF-kappa-B on 2 critical serine residues. These modifications allow polyubiquitination of the inhibitors and subsequent degradation by the proteasome. 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. 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. IKK-related kinase phosphorylations may prevent the overproduction of inflammatory mediators since they exert a negative regulation on canonical IKKs. Also phosphorylates other substrates including NCOA3, BCL10 and IRS1. Within the nucleus, acts as an adapter protein for NFKBIA degradation in UV-induced NF-kappa-B activation. [UniProt] |
| Research Area | Cell Biology and Cellular Response antibody; Cell Death antibody; Gene Regulation antibody; Immune System antibody; Signaling Transduction antibody; IκB alpha degradation Study antibody; NF-κB Activation Study antibody |
| Calculated Mw | 87 kDa |
| PTM | <p>Upon cytokine stimulation, phosphorylated on Ser-177 and Ser-181 by MEKK1 and/or MAP3K14/NIK as well as TBK1 and PRKCZ; which enhances activity. Once activated, autophosphorylates on the C-terminal serine cluster; which decreases activity and prevents prolonged activation of the inflammatory response. Phosphorylated by the IKK-related kinases TBK1 and IKBKE, which is associated with reduced CHUK/IKKA and IKKB activity and NF-kappa-B-dependent gene transcription. Dephosphorylated at Ser-177 and Ser-181 by PPM1A and PPM1B.</p> <p>(Microbial infection) Acetylation of Thr-180 by Yersinia yopJ prevents phosphorylation and activation, thus blocking the I-kappa-B pathway.</p> <p>Ubiquitinated. Monoubiquitination involves TRIM21 that leads to inhibition of Tax-induced NF-kappa-B signaling. According to PubMed:19675099, 'Ser-163' does not serve as a monoubiquitination site. According to PubMed:16267042, ubiquitination on 'Ser-163' modulates phosphorylation on C-terminal serine residues.</p> <p>(Microbial infection) Monoubiquitination by TRIM21 is disrupted by Yersinia yopJ.</p> <p>Hydroxylated by PHD1/EGLN2, loss of hydroxylation under hypoxic conditions results in activation of NF-kappa-B. [UniProt]</p> |



ARG57596 anti-IKK beta antibody WB image

Western blot: 20 µg of HeLa cell lysate stained with ARG57596 anti-IKK beta antibody at 1:4000 dilution.