

ARG51780 anti-IKK beta phospho (Tyr199) antibody

Package: 100 µl, 50 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes IKK beta phospho (Tyr199)
Tested Reactivity	Hu, Ms, Rat
Tested Application	ICC/IF
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	IKK beta
Species	Human
Immunogen	Peptide sequence around phosphorylation site of tyrosine 199(Q-K-Y(p)-T-V) derived from Human IKK-β.
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; NFKB1KB; IKK-B; IkbKB; IKKB; IMD15; EC 2.7.11.10; I-kappa-B-kinase beta

Application Instructions

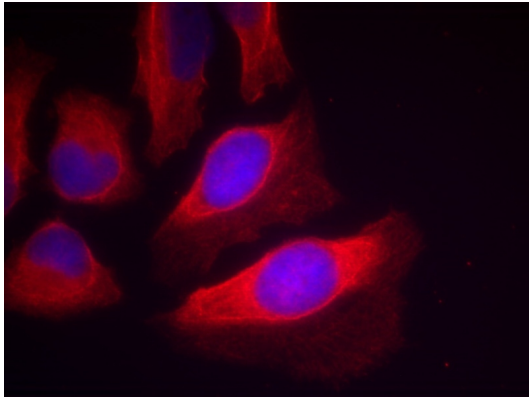
Application table	Application	Dilution
	ICC/IF	1:100 - 1:200
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

Properties

Form	Liquid
Purification	Antibodies were produced by immunizing rabbits with KLH-conjugated synthetic phosphopeptide. Antibodies were purified by affinity-chromatography using epitope-specific phosphopeptide. In addition, non-phospho specific antibodies were removed by chromatography using non-phosphopeptide.
Buffer	PBS (without Mg ²⁺ and Ca ²⁺ , pH 7.4), 150mM NaCl, 0.02% Sodium azide and 50% Glycerol.
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol
Concentration	1 mg/ml
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. 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.

Bioinformation

Gene Symbol	IKBKB
Gene Full Name	inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase beta
Background	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/IKBK, 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.
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/IKBK, 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]
Highlight	Related Antibody Duos and Panels: ARG30205 NFkB Activation Antibody Panel Related products: IKK beta antibodies: IKK beta Duos / Panels: Anti-Rabbit IgG secondary antibodies: Related news: Treatment of Obesity with Celastrol Tumor microenvironments are shown to affect progression of several cancer subtypes Immune signaling protein TLR4 has opposing roles in breast cancer development
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-kB Activation Study antibody
Calculated Mw	87 kDa
PTM	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 IKBKB activity and NF-kappa-B-dependent gene transcription. Dephosphorylated at Ser-177 and Ser-181 by PPM1A and PPM1B. (Microbial infection) Acetylation of Thr-180 by Yersinia yopJ prevents phosphorylation and activation, thus blocking the I-kappa-B pathway. 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. (Microbial infection) Monoubiquitination by TRIM21 is disrupted by Yersinia yopJ. Hydroxylated by PHD1/EGLN2, loss of hydroxylation under hypoxic conditions results in activation of NF-kappa-B.



ARG51780 anti-IKK beta phospho (Tyr199) antibody ICC/IF image

Immunofluorescence: methanol-fixed HeLa cells stained with ARG51780 anti-IKK beta phospho (Tyr199) antibody (red).
