Rabbit anti-Human IKK gamma Polyclonal Antibody | anti-IKBKG antibody

Phospho-IKK gamma (Ser31) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA321783	**Rabbit**	**Human**	**ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot**

PRODUCT SYNONYMS

IKK gamma; Polyclonal Antibody; Phospho-IKK gamma (Ser31) Antibody; IkB kinase associated protein 1; IkB kinase subunit gamma; Inhibitor of nuclear factor kappa B kinase subunit gamma; AMCBX1; FIP 3; FIP-3; FIP3; Fip3p; I kappa B kinase gamma; I-kappa-B kinase subunit gamma; IkB kinase gamma subunit; IkB kinase-associated protein 1; Ikbkg; IKK-gamma; IKKAP1; IKKG; IMD33; Incontinentia pigmenti; Inhibitor of kappa light polypeptide gene enhancer in B cells; kinase gamma; kinase of; gamma; Inhibitor of nuclear factor kappa-B kinase subunit gamma; IP; IP1; IP2; IPD2; NEMO; NEMO_HUMAN; NF kappa B essential modifier; NF kappa B essential modulator; NF-kappa-B essential modifier; NF-kappa-B essential modulator; ZC2HC9; anti-IKBKG antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Isotype	IgG
Specificity	Phospho-IKK-gamma (Ser31) antibody detects endogenous levels of IKK-gamma only when phosphorylated at Serine 31
Purity/Purification	From purified rabbit serum by affinity purification via sequential chromatography on phospho-and non-phospho-peptide affinity columns.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	487
Applicable Applications for anti-IKBKG antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human IKK-gamma around the phosphorylation site of Serine 31
Subcellular Location	Cytoplasm. Nucleus. Sumoylated NEMO accumulates in the nucleus in response to genotoxic stress.
Tissue Specificity	Heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas.
Predicted Cross Reactivity	**Pig, Bovine, Horse, Sheep, Rabbit, Dog**
Similarity	Pig (92%), Bovine (83%), Horse (92%), Sheep (83%), Rabbit (83%), Dog (92%)
Conjugation	Unconjugated
Epitope	Phospho Ser31
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES

IF (Immunofluorescence)
AAA321783 staining 293 by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.

WB (Western Blot)
Western blot analysis of Phospho-IKK gamma (Ser31) Antibody expression in TNF-a treated 293 cells lysates.The lane on the right is treated with the antigen-specific peptide.

IHC (Immunohiostchemistry)
AAA321783 at 1/200 staining human testis tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

WB (Western Blot)
Western blot analysis of IKK-gamma phosphorylation expression in TNF-a treated 293 whole cell lysates, The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-IKBKG antibody	Description: Familial incontinentia pigmenti (IP) is a genodermatosis that segregates as an X-linked dominant disorder and is usually lethal prenatally in males (The International Incontinentia Pigmenti Consortium, 2000 [PubMed 10839543]). In affected females it causes highly variable abnormalities of the skin, hair, nails, teeth, eyes, and central nervous system. Function: Regulatory subunit of the IKK core complex which 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. Its binding to scaffolding polyubiquitin seems to play a role in IKK activation by multiple signaling receptor pathways. However, the specific type of polyubiquitin recognized upon cell stimulation (either 'Lys-63'-linked or linear polyubiquitin) and its functional importance is reported conflictingly. Also considered to be a mediator for TAX activation of NF-kappa-B. Could be implicated in NF-kappa-B-mediated protection from cytokine toxicity. Essential for viral activation of IRF3. Involved in TLR3-and IFIH1-mediated antiviral innate response; this function requires 'Lys-27'-linked polyubiquitination. Subunit Structure: Homodimer; disulfide-linked. Component of the I-kappa-B-kinase (IKK) core complex consisting of CHUK, IKBKB and IKBKG; probably four alpha/CHUK-beta/IKBKB dimers are associated with four gamma/IKBKG subunits. The IKK core complex seems to associate with regulatory or adapter proteins to form a IKK-signalosome holo-complex. The IKK complex associates with TERF2IP/RAP1, leading to promote IKK-mediated phosphorylation of RELA/p65. Part of a complex composed of NCOA2, NCOA3, CHUK/IKKA, IKBKB, IKBKG and CREBBP. Interacts with COPS3, CYLD, NALP2, TRPC4AP and LRDD. Interacts with ATM; the complex is exported from the nucleus. Interacts with TRAF6. Interacts with HTLV-1 Tax oncoprotein; the interaction activates IKBKG. Interacts with IKBKE. Interacts with TANK; the interaction is enhanced by IKBKE and TBK1. Part of a ternary complex consisting of TANK, IKBKB and IKBKG. Interacts with ZFAND5. Interacts with RIPK2. Interacts with TNIP1 and TNFAIP3; TNIP1 facilitates the TNFAIP3-mediated de-ubiquitination of IKBKG. Interacts with TNFAIP3; the interaction is induced by TNF stimulation and by polyubiquitin. Binds polyubiquitin; the interaction is mediated by two domains; reports about the binding to 'Lys-63'-linked and/or linear polyubiquitin, respective binding affinities and stoichiometry are conflicting. Interacts with Shigella flexneri ipah9.8; the interaction promotes TNIP1-dependent 'Lys-27'-linked polyubiquitination of IKBKG which perturbs NF-kappa-B activation during bacterial infection. Interacts with NLRP10. Interacts with TANK; this interaction increases in response to DNA damage (PubMed:25861989). Interacts with USP10; this interaction increases in response to DNA damage (PubMed:25861989). Interacts with ZC3H12A; this interaction increases in response to DNA damage (PubMed:25861989). Interacts with IFIT5; the interaction synergizes the recruitment of IKK to MAP3K7 and enhances IKK phosphorylation (PubMed:26334375). Interacts with TRIM29; this interaction induces IKBKG/NEMO ubiquitination and proteolytic degradation (PubMed:27695001). Interacts with TRIM13; this interaction leads to IKBKG/NEMO ubiquitination (PubMed:25152375). Post-translational Modifications: Phosphorylation at Ser-68 attenuates aminoterminal homodimerization. Polyubiquitinated on Lys-285 through 'Lys-63'; the ubiquitination is mediated by NOD2 and RIPK2 and probably plays a role in signaling by facilitating interactions with ubiquitin domain-containing proteins and activates the NF-kappa-B pathway. Polyubiquitinated on Lys-399 through 'Lys-63'; the ubiquitination is mediated by BCL10, MALT1 and TRAF6 and probably plays a role in signaling by facilitating interactions with ubiquitin domain-containing proteins and activates the NF-kappa-B pathway. Monoubiquitinated on Lys-277 and Lys-309; promotes nuclear export. Polyubiquitinated through 'Lys-27' by TRIM23; involved in antiviral innate and inflammatory responses. Linear polyubiquitinated on Lys-111, Lys-143, Lys-226, Lys-246, Lys-264, Lys-277, Lys-285, Lys-292, Lys-302, Lys-309 and Lys-326; the head-to-tail polyubiquitination is mediated by the LUBAC complex and plays a key role in NF-kappa-B activation. Polyubiquitinated on Lys-309 and Lys-321 via 'Lys-27'-linked ubiquitin by Shigella flexneri E3 ubiquitin-protein ligase ipah9.8, leading to its degradation by the proteasome. Deubiquitinated by USP10 in a TANK-dependent and-independent manner, leading to the negative regulation of NF-kappaB signaling upon DNA damage (PubMed:25861989). Sumoylated on Lys-277 and Lys-309 with SUMO1; the modification results in phosphorylation of Ser-85 by ATM leading to a replacement of the sumoylation by mono-ubiquitination on these residues. Neddylated by TRIM40, resulting in stabilization of NFKBIA and down-regulation of NF-kappa-B activity. Similarity: The leucine-zipper domain and the CCHC NOA-type zinc-finger are essential for polyubiquitin binding and for the activation of IRF3.

NCBI AND UNIPROT INFORMATION

NCBI GI #	223671870
NCBI GeneID	8517
NCBI Accession #	NP_001093326.2
NCBI GenBank Nucleotide #	NM_001099856.4
UniProt Accession #	Q9Y6K9; Q7LBY6; Q7Z7F1

Molecular Weight	Observed: 48 kDa Predicted: 49 kDa
NCBI Official Full Name	NF-kappa-B essential modulator isoform b
NCBI Official Synonym Full Names	inhibitor of nuclear factor kappa B kinase subunit gamma
NCBI Official Symbol	IKBKG
NCBI Official Synonym Symbols	IP; IP1; IP2; FIP3; IKKG; IPD2; NEMO; FIP-3; Fip3p; IMD33; AMCBX1; IKKAP1; ZC2HC9; IKK-gamma
NCBI Protein Information	NF-kappa-B essential modulator
UniProt Protein Name	NF-kappa-B essential modulator
UniProt Gene Name	**IKBKG**
UniProt Synonym Gene Names	FIP3; NEMO; NEMO; IKKAP1; I-kappa-B kinase subunit gamma; IKK-gamma; IKKG; IkB kinase subunit gamma

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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