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

IKK gamma Antibody

Catalog # ASC10121

Product Information

Application	WB, ICC, E
Primary Accession	Q9Y6K9
Other Accession	AF074382, 3641279
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	48198
Conjugate	Unconjugated
Application Notes	IKK gamma antibody can be used for detection of IKK gamma by Western blot at 1 g/mL. A 52 kDa band should be detected. Antibody can also be used for immunocytochemistry starting at 5 g/mL.

Additional Information

Gene ID	8517
Other Names	IKK gamma Antibody: IP, IP1, IP2, FIP3, IPD2, NEMO, FIP-3, Fip3p, AMCBX1, ZC2HC9, IKK-gamma, NF-kappa-B essential modulator, inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase gamma
Target/Specificity	IKBKG; IKK gamma has no cross response to IKK alpha or IKK beta.
Reconstitution & Storage	IKK gamma antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	IKK gamma Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	IKBKG (HGNC:5961)
Synonyms	FIP3, NEMO
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 (PubMed:14695475, PubMed:20724660, PubMed:21518757, PubMed:9751060). Its binding to scaffolding polyubiquitin plays a key role in IKK activation by multiple signaling receptor pathways (PubMed:16547522, PubMed:18287044, PubMed:19033441, PubMed:19185524, PubMed:21606507,

	PubMed:27777308, PubMed:33567255). Can recognize and bind both 'Lys-63'-linked and linear polyubiquitin upon cell stimulation, with a much higher affinity for linear polyubiquitin (PubMed:16547522, PubMed:18287044, PubMed:19033441, PubMed:19185524, PubMed:21606507, PubMed:27777308). Could be implicated in NF-kappa-B-mediated protection from cytokine toxicity. Essential for viral activation of IRF3 (PubMed:19854139). Involved in TLR3- and IFIH1-mediated antiviral innate response; this function requires 'Lys- 27'-linked polyubiquitination (PubMed:20724660).
Cellular Location	Cytoplasm. Nucleus Note=Sumoylated NEMO accumulates in the nucleus in response to genotoxic stress.
Tissue Location	Heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas

Background

IKK gamma Antibody: Nuclear factor kappa B (NF-κB) is a ubiquitous transcription factor and an essential mediator of gene expression during activation of immune and inflammatory responses. NF-κB mediates the expression of a great variety of genes in response to extracellular stimuli. NF-κB is associated with IκB proteins in the cell cytoplasm, which inhibit NF-κB activity. The IκB kinase (IKKα and IKKβ) phosphorylates IκB and mediates NF-κB activation. A novel molecule in the IKK complex was recently identified and termed IKKγ/NEMO/FIP3/IKKAP1. IKKγ interacts with IKKβ and is required for the activation of IKK complex and NF-κB by LPS, PMA, TNF, and IL-1 stimulation. FIP3 was also shown to bind to RIP and NIK and to mediate TNF-induced NF-κB activation.

References

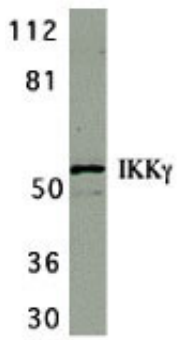
Rothwarf DM, Zandi E, Natoli G, Karin M. IKK-γ is an essential regulatory subunit of the IκB kinase complex. Nature 1998;395(6699):297-300

Yamaoka S, Courtois G, Bessia C, Whiteside ST, Weil R, Agou F, Kirk HE, Kay RJ, Israel A. Complementation cloning of NEMO, a component of the IκB kinase complex essential for NF-κB activation. Cell. 1998;93(7):1231-40.

Li Y, Kang J, Friedman J, Tarassishin L, Ye J, Kovalenko A, Wallach D, Horwitz MS. Identification of a cell protein (FIP-3) as a modulator of NF-κB activity and as a target of an adenovirus inhibitor of tumor necrosis factor α-induced apoptosis. Proc Natl Acad Sci U S A 1999;96(3):1042-7

Mercurio F, Murray BW, Shevchenko A, Bennett BL, Young DB, Li JW, Pascual G, Motiwala A, Zhu H, Mann M, Manning AM. IκB kinase (IKK)-associated protein 1, a common component of the heterogeneous IKK complex. Mol Cell Biol. 1999;19(2):1526-38.

Images



Western blot analysis of IKK gamma in HeLa whole cell lysate with IKK gamma antibody at 1 µg/mL.

Immunocytochemistry of IKK gamma in HeLa cells with IKK gamma antibody at 5 µg/mL.