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IKK gamma Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM8110a

Product Information

Application	WB, E
Primary Accession	Q9Y6K9
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse IgG1
Clone Names	55AT986.5.78
Calculated MW	48198

Additional Information

Gene ID	8517
Other Names	NF-kappa-B essential modulator, NEMO, FIP-3, IkB kinase-associated protein 1, IKKAP1, Inhibitor of nuclear factor kappa-B kinase subunit gamma, I-kappa-B kinase subunit gamma, IKK-gamma, IKKG, IkB kinase subunit gamma, NF-kappa-B essential modifier, IKBKG, FIP3, NEMO
Target/Specificity	This IKK gamma antibody was raised using purified His-tagged recombinant full length human IKK gamma.
Dilution	WB~~1:500~1000 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
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

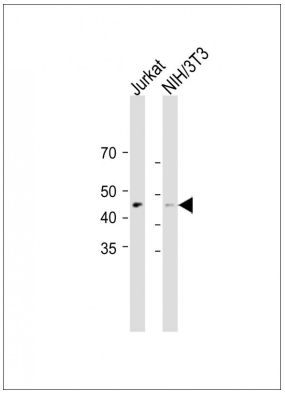
Background

This gene encodes the regulatory subunit of the inhibitor of kappaB kinase (IKK) complex, which activates NF-kappaB resulting in activation of genes involved in inflammation, immunity, cell survival, and other pathways. Mutations in this gene result in incontinentia pigmenti, hypohidrotic ectodermal dysplasia, and several other types of immunodeficiencies. Multiple transcript variants encoding different isoforms have been found for this gene. A pseudogene highly similar to this locus is located in an adjacent region of the X chromosome.

References

Immune deficiency caused by impaired expression of nuclear factor-kappaB essential modifier (NEMO) because of a mutation in the 5' untranslated region of the NEMO gene. Mooster JL, et al. J Allergy Clin Immunol, 2010 Jul. PMID 20542322.
NEMO gene mutations in Chinese patients with incontinentia pigmenti. Hsiao PF, et al. J Formos Med Assoc, 2010 Mar. PMID 20434027.
The LCR at the IKBKG locus is prone to recombine. Fusco F, et al. Am J Hum Genet, 2010 Apr 9. PMID 20380930.
IKK{gamma} protein is a target of BAG3 regulatory activity in human tumor growth. Ammirante M, et al. Proc Natl Acad Sci U S A, 2010 Apr 20. PMID 20368414.
Activation of noncanonical NF-kappaB signaling by the oncoprotein Tio. de Jong SJ, et al. J Biol Chem, 2010 May 28. PMID 20353939.

Images



All lanes: Anti-IKK gamma Antibody at 1:1000 dilution
Lane 1: Jurkat whole cell lysate Lane 2: NIH/3T3 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 48 KDa Blocking/Dilution buffer: 5% NFDM/TBST.

Citations

- Iron-mediated H2O2 production as a mechanism for cell type-specific inhibition of tumor necrosis factor alpha-induced but not interleukin-1beta-induced IkappaB kinase complex/nuclear factor-kappaB activation.

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