Technical Data Sheet

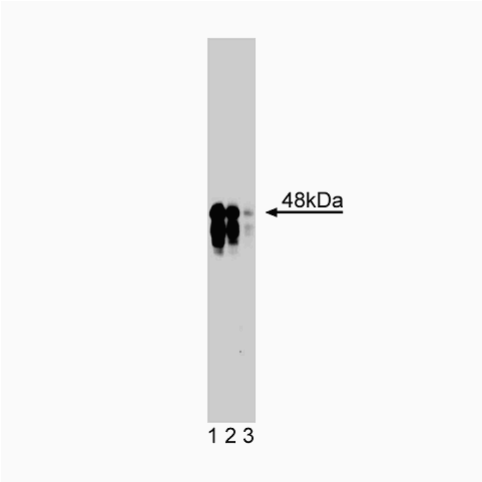
Purified Mouse Anti-IKKγ

Product Information

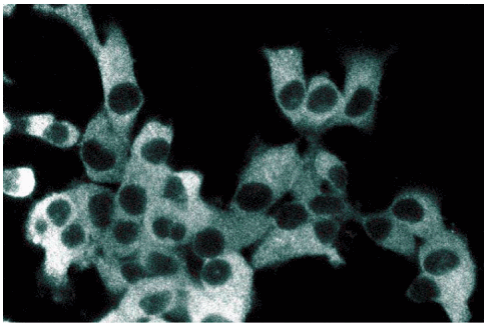
Material Number:	**611306**
Alternate Name:	NEMO
Size:	50 µg
Concentration:	250 µg/ml
Clone:	54/IKKγ/NEMO
Immunogen:	Mouse IKKγ/NEMO aa. 278-396
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Rat Tested in Development: Human, Dog
Target MW:	48 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

In most cells, NF-κB is sequestered in an inactive cytoplasmic form via interactions with the inhibitory proteins IκBα, IκBβ, and IκBε. Cell stimulation induces the release, activation, and nuclear translocation of NF-κB. Release of NF-κB results from the phosphorylation and subsequent proteolytic degradation of the IκB proteins. Two cytokine-inducible IκB kinases (IKKα and IKKβ) phosphorylate and target the IκB proteins for degradation by the ubiquitin pathway. These kinases are components of a 700-900 kDa multisubunit complex that also contains NF-κB/RelA, IκBα, MEKK1, NIK, IKAP, and IKKγ/NEMO (NF-κB essential modulator). IKKγ contains two coiled-coil domains and a leucine zipper which allow it to form dimers and trimers that interact directly with IKKβ. IKKγ, essential for IKKα/IKKβ activation of NF-κB, is located functionally and physically upstream of these subunits. In addition, IKKγ enables the HTLV-1 Tax oncoprotein to interact with IKKβ, resulting in constitutive activation of NF-κB and maintenance of cellular transformation. Thus, IKKγ is an essential element of the IκB complex and an adaptor that mediates stable formation of Tax-IKK complexes.



Western blot analysis of IKKγ on rat kidney lysate.
Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of anti-IKKγ antibody.



Immunofluorescent staining of ES2 cells with anti-IKKγ antibody.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20°C.

BD Biosciences

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml .

Suggested Companion Products

Catalog Number	Name	Size	Clone
611466	Rat Kidney Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

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Jin DY, Giordano V, Kibler KV, Nakano H, Jeang KT. Role of adapter function in oncoprotein-mediated activation of NF-kappaB. Human T-cell leukemia virus type I Tax interacts directly with IkappaB kinase gamma. *J Biol Chem.* 1999; 274(25):17402-17405.(Biology)

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

Weil R, Schwamborn K, Alcover A, Bessia C, Di Bartolo V, Israël A. Induction of the NF-kappaB cascade by recruitment of the scaffold molecule NEMO to the T cell receptor. *Immunity.* 2003; 18(1):13-26.(Clone-specific: Immunofluorescence, Immunoprecipitation, Western blot)

Yamaoka S, Courtois G, Bessia C. Complementation cloning of NEMO, a component of the IkappaB kinase complex essential for NF-kappaB activation. *Cell.* 1998; 93(7):1231-1240.(Biology)