Revision 1

Store at -20C

#13829

NLRX1 (D4M3Z) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R	Endogenous	100	Rabbit IgG	#Q86UT6	79671

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

NLRX1 (D4M3Z) Rabbit mAb recognizes endogenous levels of total NLRX1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val437 of human NLRX1 protein.

Background

The nucleotide-binding oligomerization domain (NOD)-like receptor (NLR) family of proteins is a diverse family of cytoplasmic innate immune receptors. They are characterized by the presence of an amino-terminal effector domain, which is often either a caspase activation and recruitment domain (CARD) or a pyrin domain (PYD), followed by a NACHT domain and carboxy-terminal leucine-rich-repeats (LRR) involved in recognition of pathogen-associated molecular patterns (PAMPs) (1). NLR proteins play a variety of roles during the innate immune response including pathogen sensing, transcriptional activation of proinflammatory cytokines through NF-κB, transcriptional activation of type I interferons through IRFs, and formation of inflammasomes leading to activation of inflammatory caspases (1-7). NLRX1 (CLR11.3/NOD26/NOD5/NOD9) is unique among NLR family members in that it contains an amino-terminal mitochondrial targeting sequence resulting in localization to the mitochondria (8,9). In contrast to most NLR proteins, NLRX1 has been shown to act as a negative regulator of innate immune responses through inhibition of MAVS-Rig-I signaling, as well as inhibition of Toll-like receptor (TLR)-mediated NF-κB activation (9-11). In addition, overexpression of NLRX1 enhanced the production of reactive oxygen species (ROS), resulting in prolonged NF-κB and JNK signaling in response to TNF-α (8).

Background References

1. Elinav, E. et al. (2011) *Immunity* 34, 665-79.
2. Inohara, N. et al. (1999) *J Biol Chem* 274, 14560-7.
3. Ogura, Y. et al. (2001) *J Biol Chem* 276, 4812-8.
4. Sabbah, A. et al. (2009) *Nat Immunol* 10, 1073-80.
5. Mariathasan, S. et al. (2004) *Nature* 430, 213-8.
6. Agostini, L. et al. (2004) *Immunity* 20, 319-25.
7. Martinon, F. et al. (2002) *Mol Cell* 10, 417-26.
8. Tattoli, I. et al. (2008) *EMBO Rep* 9, 293-300.
9. Moore, C.B. et al. (2008) *Nature* 451, 573-7.
10. Allen, I.C. et al. (2011) *Immunity* 34, 854-65.
11. Xia, X. et al. (2011) *Immunity* 34, 843-53.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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