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Anti-NLRC4 (Ser-533), Phosphospecific Antibody

Catalog # AN1860

Product Information

Application	WB
Primary Accession	Q3UP24
Host	Rat
Clonality	Rat Monoclonal
Isotype	N.T.
Clone Names	M549
Calculated MW	116749

Additional Information

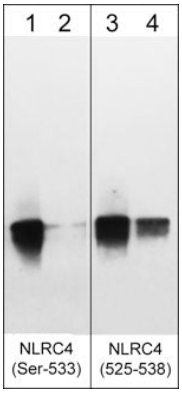
Gene ID	268973
Other Names	CARD12, CLAN1, IPAF, NLR family CARD domain-containing protein 4, NOD-like receptor 4
Dilution	WB~~1:1000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Anti-NLRC4 (Ser-533), Phosphospecific Antibody is for research use only and not for use in diagnostic or therapeutic procedures.
Shipping	Blue Ice

Background

The nucleotide-binding oligomerization domain (NOD)-like receptor (NLR) family is a diverse family of cytoplasmic innate immune receptors that are involved in recognition of pathogen-associated molecular patterns. NLRs are important for pathogen sensing, transcriptional activation of proinflammatory cytokines and activation of inflammatory caspases. NLRC4 (IPAF, CARD12) forms the inflammasome that responds to bacterial flagellin. This inflammasome is activated by NLRC4 oligomerization, NAIP protein binding, and activation of caspase-1 leading to pyroptosis. NLRC4 is phosphorylated on Ser-533 by PKCδ following infection of macrophages with S. typhimurium. Mutant forms of NLRC4 demonstrate that an unphosphorylatable form (S533A) does not activate caspase-1 and pyroptosis in response to S. typhimurium, while a phosphomimetic NLRC4 (S533D) mutant causes rapid macrophage pyroptosis without infection. Thus, PKCδ phosphorylation of NLRC4 (S533) may be a critical event in inflammasome activation and host innate immunity.

Images

Western blot image of mouse recombinant NLRC4 (Ser-533) phosphorylated peptide (lanes 1-4). The blot



was dephosphorylated with lambda phosphatase (lanes 2 & 4) then the blot was probed with rat monoclonal anti-NLRC4 (Ser-533) phospho-specific (lanes 1 & 2) and rabbit polyclonal anti-NLRC4 (a.a. 525-538) (lanes 3 & 4).