

Product datasheet for **TA389168**

Phospho-NLRC4 (pSer533) Rat Antibody [Clone ID: M549]

Product data:

Product Type:	Primary Antibodies
Clone Name:	M549
Applications:	WB
Recommended Dilution:	WB: 1:500
Reactivity:	Human, Rat, Mouse
Host:	Rat
Immunogen:	Clone M549 was generated from a phospho-NLRC4 (Ser-533) synthetic peptide (coupled to carrier) corresponding to amino acids surrounding serine 533 in mouse NLRC4. This sequence has high homology to human and rat NLRC4, and is not homologous to sequences in other NLR family members.
Specificity:	This antibody antibody detects a 110 kDa* protein on SDS-PAGE immunoblots of PMA-differentiated THP1 human macrophages. In addition, the antibody detects a mouse recombinant phospho-NLRC4 (Ser-533) peptide, but does not detect this peptide after lambda phosphatase treatment.
Formulation:	PBS + 1 mg/ml BSA, 0.05% NaN ₃ and 50% glycerol
Concentration:	lot specific
Purification:	Antigen Affinity Purified
Conjugation:	Unconjugated
Storage:	Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol. Stable for at least 1 year at -20°C.
Stability:	After date of receipt, stable for at least 1 year at -20°C.
Predicted Protein Size:	110
Database Link:	Q9NPP4



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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 PKC δ 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, PKC δ phosphorylation of NLRC4 (S533) may be a critical event in inflammasome activation and host innate immunity.

Note:

Protein G purified tissue culture supernatant.