PRODUCT INFORMATION



IRAK4 Polyclonal Antibody

Item No. 13845

Overview and Properties

Contents:	This vial contains 100 μg protein G-purified antibody in 200 μI PBS containing 0.05% BSA and 0.05% sodium azide
Synonyms:	IL-1 Receptor-associated Kinase 4, Interleukin-1 Receptor-associated Kinase 4
Immunogen:	Synthetic peptide from a mixture of mouse IRAK4 amino acids 38-54 and 120-136
Cross Reactivity:	(+) Human IRAK4; (+) Mouse IRAK4
Form:	Liquid
Storage:	4°C (as supplied)
Stability:	≥6 months
Host:	Rabbit
Isotype:	lgG
Applications:	Immunoprecipitation (IP) and Western blot (WB); the recommended starting dilution
	is 1:500-1:1,000 for WB. IP and other applications were not tested, therefore optimal
	working concentration/dilution should be determined empirically.

Image



WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

The toll-like receptor (TLR) family in mammals comprises a family of transmembrane proteins characterized by multiple copies of leucine rich repeats in the extracellular domain and an interleukin-1 (IL-1) receptor motif in the cytoplasmic domain. Like its counterparts in *Drosophila*, TLRs signal through adaptor molecules.¹ Interleukin-1 receptor-associated kinases (IRAKs) are important mediators in the signal transduction of Toll/IL-1 receptor (TIR) family members.² The cytoplasmic domains of TIR proteins interact with the adapter protein, MyD88. MyD88 then recruits IRAKs (IRAK1-4), which in turn interact with other adapter molecules, such as TRAF6 to activate NF-κB and MAPK pathways. A member of this family, IRAK4 has been identified.³ IRAK4 may act as an upstream activator of IRAK1. IRAK4 is important for LPS activation of TLRs. Mice lacking IRAK4 are resistant to lethal doses of LPS and are also severely impaired in their responses to viral and bacterial challenges.^{4,5}

References

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- 2. Cao, Z., Xiong, J., Takeuchi, M., et al. TRAF6 is a signal transducer for interleukin-1. Nature 383(6599), 443-446 (1996).
- 3. Li, S., Strelow, A., Fontana, E.J., et al. IRAK-4: A novel member of the IRAK family with the properties of an IRAK-kinase. Proc. Natl. Acad. Sci. USA 99(8), 5567-5572 (2002).
- 4. Suzuki, N., Suzuki, S., Duncan, G.S., *et al.* Severe impairment of interleukin-1 and toll-like receptor signalling in mice lacking IRAK-4. *Nature* **416(6882)**, 750-756 (2002).
- Suzuki, N., Suzuki, S., and Yeh, W.-C. IRAK-4 as the central TIR signaling mediator in innate immunity. Trends Immunol. 23(10), 503-506 (2002).

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