

# Product Information



## IRAK-1 Polyclonal Antibody

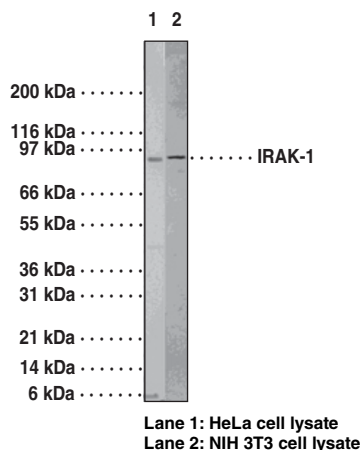
Item No. 13843

- Contents:** This vial contains 100 µg of protein G-purified IgG in 200 µl PBS containing 0.05% BSA and 0.05% sodium azide.
- Synonym:** Interleukin-1 Receptor-Associated Kinase 1
- Antigen:** Synthetic peptide corresponding to human IRAK-1 amino acids 700-712
- Host:** Rabbit
- Cross Reactivity:** (+) Human and mouse IRAK-1; predicted to react with rat IRAK-1; (-) IRAK-2
- Storage:** ≤6 months at 4°C; ≥6 months at -20°C
- Applications:** Immunoprecipitation (IP) and western blot (WB); the recommended starting concentration for IP is 2-4 µg per sample and WB is 0.5-1 µg/ml.

Nuclear factor-κB (NF-κB) is a ubiquitous transcription factor and an essential mediator of gene expression during activation of immune and inflammatory responses. NF-κB mediates the expression of a great variety of genes in response to extracellular stimuli including IL-1, TNF-α, and LPS. A serine/threonine protein kinase associated with interleukin-1 receptor-associated kinase 1 (IRAK-1) and its homologue murine pelle-like protein kinase (mPLK) has been identified.<sup>1,2</sup> IRAK-1 is associated with the IL-1 receptor subunits IL-1RI and IL-1RAcP after IL-1 binding and serves as a signaling molecule to mediate IL-1 response.<sup>3</sup> IRAK-1 mediates a signaling cascade leading to NF-κB activation by members of the IL-1 family including IL-1 and IL-18 (also known as IGIF).<sup>2,4</sup>

### References

- Huang, J., Gao, X., Li, S., *et al.* Recruitment of IRAK to the interleukin 1 receptor complex requires interleukin 1 receptor accessory protein. *Proc. Natl. Acad. Sci. USA* **34.1**, 12829-12832 (1997).
- Robinson, D., Shibuya, K., Mui, A., *et al.* IGIF does not drive Th1 development but synergizes with IL-12 for interferon-γ production and activates IRAK and NFκB. *Immunity* **7**, 571-581 (1997).
- Trofimova, M., Sprengle, A.B., Green, M., *et al.* Developmental and tissue-specific expression of mouse pelle-like protein kinase. *J. Biol. Chem.* **271(30)**, 17609-17612 (1996).
- Cao, Z., Henzel, W.J., and Gao, X. IRAK: A kinase associated with the interleukin-1 receptor. *Science* **271**, 1128-1131 (1996).



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**Mailing address**  
1180 E. Ellsworth Road  
Ann Arbor, MI  
48108 USA

**Phone**  
(800) 364-9897  
(734) 971-3335

**Fax**  
(734) 971-3640

**E-Mail**  
custserv@caymanchem.com

**Web**  
[www.caymanchem.com](http://www.caymanchem.com)

**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY. NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

#### MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

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