

## Product Information

### ANTI-INTERLEUKIN-1 RECEPTOR ACCESSORY PROTEIN (IL-1RAcP), C-Terminal

Developed in Rabbit, Affinity Isolated Antibody

Product Number **I 1404**

#### Product Description

Anti-IL-1RAcP is developed in rabbit using a synthetic peptide corresponding to the C-terminal amino acids 549-569 of human interleukin-1 receptor accessory protein (IL-1RAcP) as immunogen. This sequence differs from that of mouse by 3 amino acids.<sup>1</sup>

Anti-IL-1RAcP recognizes IL-1RAcP (IL-1 receptor accessory protein) from human tissues by immunoblotting (66 kDa). There is no cross-reactivity to other members in the IL-1 receptor family.

IL-1RAcP is a subunit of IL-1RI, the receptor for the pro-inflammatory cytokine, interleukin 1.<sup>1</sup> The response of cells to IL-1 is dependent on the activity of IL-1RAcP. IL-1 treatment of cells induces the formation of a complex containing both IL-1RI and IL-1RAcP.<sup>2</sup> Then the IL-1 receptor-associated kinase (IRAK) is recruited to this complex and activated through its association with IL-1RAcP.<sup>2</sup> The activation of SAP kinase (stress-activated kinase) is similarly dependent on IL-1RAcP.<sup>3</sup> IL-1RAcP, therefore, appears necessary to link binding of IL-1 to its receptor on the plasma membrane to downstream signaling events culminating in the activation of transcription factor NF-κB which then promotes the expression of a number of pro-inflammatory genes in the nucleus.<sup>3,4</sup>

IL-1RAcP is a 570-amino acid protein of ~66 kDa. It is a member of the immunoglobulin superfamily and bears limited homology throughout the protein of both Type I and Type II IL-1 receptors.<sup>1</sup> Sequence analysis reveals that IL-1RAcP contains a protein kinase C docking site and a putative GTPase domain. IL-1RAcP mRNA is expressed in a wide range of cell types, and its expression correlates with IL-1 responsiveness. Highest amounts are found in liver and hypothalamus.

#### Reagents

Anti-IL-1RAcP is supplied as 0.5 mg/ml of affinity isolated antibody in phosphate buffered saline, containing 0.02% sodium azide.

#### Precautions and Disclaimer

Due to the sodium azide content a material safety data sheet (MSDS) has been sent to the attention of the safety officer at your institution. Consult the MSDS for information regarding hazards and safe handling practices.

#### Storage/Stability

For continuous use, store at 2-8°C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

#### Product Profile

The recommended working concentration is 0.5-1 µg/ml (1:1,000-1:500 dilution) for immunoblotting using total HeLa cell lysates. A band of ~66 kDa is detected.

Note: In order to obtain best results and assay sensitivities in different techniques and preparations, we recommend determining optimal working dilutions by titration test.

#### References

1. Greenfeder, S. A., et al., Molecular cloning and characterization of a second subunit of the interleukin 1 receptor complex. *J. Biol. Chem.*, **270**, 13757-13765 (1995).
2. Huang, J., et al., Recruitment of IRAK to the interleukin 1 receptor complex requires interleukin 1 receptor accessory protein. *Proc. Natl. Acad. Sci. USA*, **94**, 12829-12832 (1997).

3. Wesche, H., et al., The interleukin-1 receptor accessory protein (IL-1RacP) is essential for IL-1 induced activation of interleukin-1 receptor associated kinase (IRAK) and stress-activated protein kinases (SAP Kinases). *J. Biol. Chem.*, **272**, 7727-7731 (1997).
4. Hofmeister, R., et al., Activation of acid sphingomyelinase by interleukin-1 (IL-1) requires the IL-1 receptor accessory protein. *J. Biol. Chem.*, **272**, 27730-27736 (1997).

lpg 9/00

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.