# Human IL-1 RAcP/IL-1 R3 Antibody

Monoclonal Mouse $IgG_1$ Clone # 89412

Catalog Number: MAB676

## DESCRIPTION

| | |
|---|---|
| **Species Reactivity** | Human |
| **Specificity** | Detects human IL-1RAcP/IL-1 R3 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) IL-1 RI, rhIL-1 RII, rhST2, rhIL-18 Rα, IL-1 Rrp2, rhIL-18 RAP, rhSIGIRR, rhIL-1 RAPL1, rhIL-1 RAPL2, rhTLR1, rhTLR2, rhTLR3, rhTLR4, rhTLR5, rhTLR7, rhTLR8, rhTLR9, rhTLR10, rhMD-1, rhMD-2, or recombinant mouse RP105 is observed. |
| **Source** | Monoclonal Mouse $IgG_1$ Clone # 89412 |
| **Purification** | Protein A or G purified from hybridoma culture supernatant |
| **Immunogen** | *S. frugiperda* insect ovarian cell line *Sf*21-derived recombinant human IL-1RAcP/IL-1 R3<br>Ser21-Glu359 (predicted)<br>Accession # Q9NPH3 |
| **Formulation** | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS. |

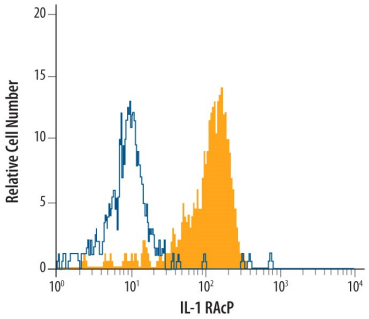
## APPLICATIONS

**Please Note:** *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

| | Recommended Concentration | Sample |
|---|---|---|
| **Flow Cytometry** | 2.5 µg/$10^6$ cells | See Below |

## DATA

**Flow Cytometry**




**Detection of IL-1 RAcP/IL-1 R3 in Human PBMC by Flow Cytometry.** Human peripheral blood monocytes were stained with Human IL-1 RAcP/IL-1 R3 Monoclonal Antibody (Catalog # MAB676, filled histogram) or isotype control antibody (Catalog # MAB002, open histogram), followed by Phycoerythrin-conjugated Anti-Mouse IgG $F(ab')_2$ Secondary Antibody (Catalog # F0102B).

## PREPARATION AND STORAGE

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|---|---|
| **Reconstitution** | Sterile PBS to a final concentration of 0.5 mg/mL. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C |
| **Stability & Storage** | **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**<br>● 12 months from date of receipt, -20 to -70 °C as supplied.<br>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>● 6 months, -20 to -70 °C under sterile conditions after reconstitution. |



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## BACKGROUND

IL-1 Receptor Accessory Protein (also IL-1 R3) is a ubiquitous 70-90 kDa member of the interleukin-1 receptor family of proteins (1-5). It serves as a non-ligand-binding accessory component of the receptors for IL-1α, IL-1β, and IL-33 (6, 7). Together with IRAK4 and MyD88, it generates a functional signaling complex with IL-1 RI; by itself, it generates a non-signaling, but high-affinity binding complex with IL-1 RII (8). In addition, it interacts with ST2 on mast cells and Th2 T cells to create a functional IL-33 receptor complex (7). Mature human IL-1 RAcP is a type I transmembrane glycoprotein that is 550 amino acids in length. It contains a 347 amino acid (aa) extracellular region (aa 21-367), a 21 aa transmembrane segment, and a 182 aa cytoplasmic domain (9). The extracellular region shows three C2-type Ig-like domains, the most membrane proximal of which is suggested to be responsible for dimerization with IL-1 RI (10). There are three alternative splice forms reported for IL-1 RAcP. One is transmembrane and shows a 239 aa substitution for the C-terminal 122 amino acids (11). The other two are soluble; one shows a six aa substitution for aa 351-570, while a second shows a 45 aa substitution for aa 302-579 (12, 13). The soluble receptor isoforms appear to be inhibitory to IL-1 signaling. When present with soluble IL-1 RII, soluble IL-1 RAcP increases the IL-1 binding affinity of IL-1 RII more than 100-fold, thus neutralizing the effects of IL-1 (14). The human and mouse IL-1 RAcP precursors are 89% aa identical; within the extracellular region, they share 86% aa identity.

**References:**

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