Human IL-1 RAPL2/IL-1 R9 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1007

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-1 RAPL2/IL-1 R9 in direct ELISAs and Western blots. In direct ELISAs, approximately 35% cross-reactivity with recombinant mouse IL-1 RAPL2/IL-1 R9 is observed. In Western blots, approximately 5% cross-reactivity with recombinant human (rh) IL-1 R7 is observed and less than 1% cross-reactivity with rhIL-1 R2 and rhIL-1 R8 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human IL-1 RAPL2/IL-1 R9 Thr17-Glu356 Accession # Q9NP60
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

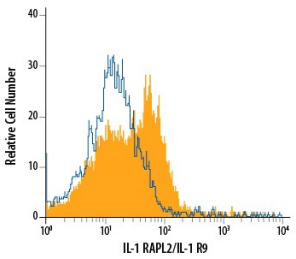
APPLICATIONS

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
Western Blot	0.1 µg/mL	Recombinant Human IL-1 RAPL2/IL-1 R9 Fc Chimera (Catalog # 1007-MR)
Flow Cytometry	2.5 µg/10^6 cells	See Below
Immunohistochemistry	5-15 µg/mL	Immersion fixed paraffin-embedded sections of human liver and skin
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

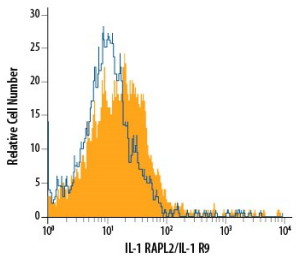
DATA

Flow Cytometry



Detection of IL-1 RAPL2/IL-1 R9 in HepG2 Human Cell Line by Flow Cytometry. HepG2 human hepatocellular carcinoma cell line was stained with Goat Anti-Human IL-1 RAPL2/IL-1 R9 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1007, filled histogram) or control antibody (Catalog # AB-108-C, open histogram), followed by Allophycocyanin-conjugated Anti-Goat IgG Secondary Antibody (Catalog # F0108).

Flow Cytometry



Detection of IL-1 RAPL2/IL-1 R9 in Hepa 1-6 Mouse Cell Line by Flow Cytometry. Hepa 1-6 mouse hepatoma cell line was stained with Goat Anti-Human IL-1 RAPL2/IL-1 R9 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1007, filled histogram) or control antibody (Catalog # AB-108-C, open histogram), followed by Allophycocyanin-conjugated Anti-Goat IgG Secondary Antibody (Catalog # F0108).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *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.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

The Interleukin 1 receptor family (IL-1 R) comprises at least eleven members including IL-1 RI (IL-1 R1), IL-1 RII (IL-1 R2), IL-1 RAcP (IL-1 R3), ST2 (T1/IL-1 R4), IL-18 Rα (IL-1 Rrp/IL-1 R5), IL-1 Rrp2 (IL-1 RL2/IL-1 R6), IL-18 Rβ (AcPL/IL-1 R7), IL-1 RAPL1 (TIGIRR-2/IL-1 R8), and IL-1 RAPL2 (TIGIRR-1/IL-1 R9) (1). All family members possess three immunoglobulin (Ig)-like domains in their extracellular region. Most members also have an intracellular TIR (Toll-like receptor/IL-1 receptor signaling) domain that is also conserved in the Toll-like receptor family. Related proteins, SIGIRR (single Ig domain-containing IL-1 R-related molecule) and IL-18BP, differ from the other members by having only one Ig domain (1). IL-1 receptor accessory protein-like 2 (IL-1 RAPL2) is alternately known as IL-1 R9 and three immunoglobulin domain containing IL-1 receptor-related molecule 1 (TIGIRR-1) and is expressed in the brain (2). Its sequence predicts an 686 amino acid (aa) residue type I transmembrane glycoprotein with a 17 aa signal peptide, a 339 aa extracellular region containing three Ig-like domains, an 18 aa transmembrane domain and a 312 aa cytoplasmic tail (3). By comparison to other IL-1 receptor family proteins, IL-1 RAPL2 has a C-terminal cytoplasmic extension beyond the TIR domain that is found in IL-1 RAPL1 and SIGIRR but not other family members (3). Human and mouse IL-1 RAPL2 share approximately 95% aa sequence identity. Human IL-1 RAPL2 is most homologous (63%) to IL-1 RAPL1, a receptor protein that is highly expressed in hippocampus and is involved in X-linked mental retardation (4, 5). Genes for both have been localized to human chromosome Xq22. A ligand for IL-1 RAPL2 has not been identified (1).

References:

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