Rat IL-1β/IL-1F2 Biotinylated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: BAF501

DESCRIPTION

Species Reactivity	Rat
Specificity	Detects rat IL-1β/IL-1F2 in ELISAs and Western blots. In sandwich immunoassays, less than 0.8% cross-reactivity with recombinant mouse (rm) IL-1β is observed and less than 0.2% cross-reactivity with recombinant human (rh) IL-1α, recombinant rat IL-1α, recombinant porcine (rp) IL-1α, rhIL-1β, rpIL-1β, rhIL-1 RA, rmIL-1 RA, rpIL-1 RA, rhIL-1 RII, rmIL-1 RI Fc Chimera, rhIL-1 Rrp2 Fc Chimera, and rhIL-1 RAcP Fc Chimera is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant rat IL-1β/IL-1F2 (R&D Systems, Catalog # 501-RL) Val117-Ser268 Accession # Q63264
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

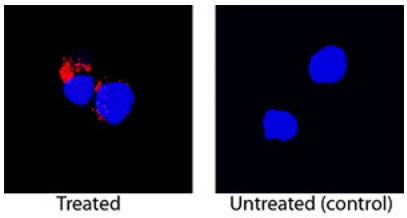
APPLICATIONS

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 Rat IL-1β/IL-1F2 (Catalog # 501-RL)
Immunocytochemistry	5-15 µg/mL	See Below
Rat IL-1β/IL-1F2 Sandwich Immunoassay		**Reagent**
ELISA Capture	0.2-0.8 µg/mL	Rat IL-1β/IL-1F2 Antibody (Catalog # AF-501-NA)
ELISA Detection	0.1-0.4 µg/mL	Rat IL-1β/IL-1F2 Biotinylated Antibody (Catalog # BAF501)
Standard		Recombinant Rat IL-1β/IL-1F2 (Catalog # 501-RL)

DATA

Immunocytochemistry



IL-1β/IL-1F2 in Rat Splenocytes. IL-1β/IL-1F2 was detected in immersion fixed rat splenocytes treated with PMA and calcium ionomycin using Goat Anti-Rat IL-1β/IL-1F2 Biotinylated Antigen Affinity-purified Polyclonal Antibody (Catalog # BAF501) at 15 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Streptavidin (red; Catalog # NL999) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

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.
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

IL-1 is a name that designates two pleiotropic cytokines, IL-1α (IL-1F1) and IL-1β (IL-1F2), which are the products of distinct genes. IL-1α and IL-1β are structurally related polypeptides that share approximately 26% amino acid (aa) identity in rat. Both proteins are produced by a wide variety of cells in response to inflammatory agents, infections, or microbial endotoxins. While IL-1α and IL-1β are regulated independently, they bind to the same receptor and exert identical biological effects. IL-1 RI binds directly to IL-1α or IL-1β and then associates with IL-1 R accessory protein (IL-1 R3/IL-1 R AcP) to form a high-affinity receptor complex that is competent for signal transduction. IL-1 RII has high affinity for IL-1β but functions as a decoy receptor and negative regulator of IL-1β activity. IL-1ra functions as a competitive antagonist by preventing IL-1α and IL-1β from interacting with IL-1 RI (1-4). The rat IL-1β cDNA encodes a 268 aa precursor. A 116 aa propeptide is cleaved intracellularly by the cysteine protease IL-1β-converting enzyme (Caspase-1/ICE) to generate the active cytokine (5, 6). The 17 kDa mature rat IL-1β shares 90% aa sequence identity with cotton rat and mouse and 65-77% with canine, equine, feline, human, porcine, and rhesus IL-1β.

References:

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