Rat IL-1β/IL-1F2 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF-501-NA

DESCRIPTION

Species Reactivity	Rat
Specificity	Detects rat IL-1β/IL-1F2 in ELISAs and Western blots. In sandwich immunoassays, less than 1% cross-reactivity with recombinant mouse IL-1β is observed and less than 0.5% cross-reactivity with recombinant human IL-1β and recombinant porcine IL-1β 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
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
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 as a 0.2 µm filtered solution in PBS.

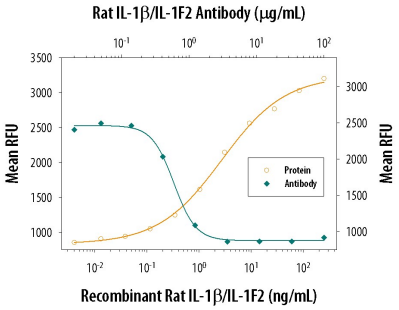
APPLICATIONS

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 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)
Neutralization	Measured by its ability to neutralize IL−1β/IL−1F2-induced proliferation in the D10.G4.1 mouse helper T cell line. Symons, J.A. *et al.* (1987) in Lymphokines and Interferons, a Practical Approach. Clemens, M.J. *et al.* (eds): IRL Press. 272. The Neutralization Dose (ND_{50}) is typically 2-10 µg/mL in the presence of 10 ng/mL Recombinant Rat IL−1β/IL−1F2 and 1.25 µg/mL concanavalin A.	

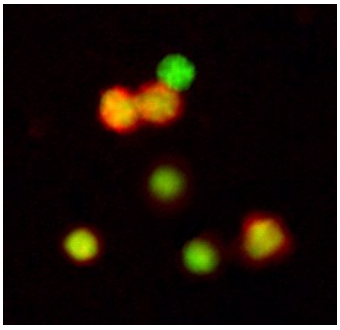
DATA

Neutralization



Cell Proliferation Induced by IL-1β/IL-1F2 and Neutralization by Rat IL-1β/IL-1F2 Antibody. Recombinant Rat IL-1β/IL-1F2 (Catalog # 501-RL) stimulates proliferation in the the D10.G4.1 mouse helper T cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Rat IL-1β/IL-1F2 (10 ng/mL) is neutralized (green line) by increasing concentrations of Rat IL-1β/IL-1F2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-501-NA). The ND_{50} is typically 2-10 µg/mL in the presence of concanavalin A (1.25 µg/mL).

Immunocytochemistry



IL-1β/IL-1F2 in Rat Splenocytes. IL-1β/IL-1F2 was detected in immersion fixed LPS-stimulated rat splenocytes using 5 µg/mL Rat IL-1β/IL-1F2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-501-NA) for 3 hours at room temperature. Cells were stained with the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained (green). 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. *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.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956

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. 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. 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 macaque IL-1β.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 **Europe | Middle East | Africa** TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956