

DESCRIPTION

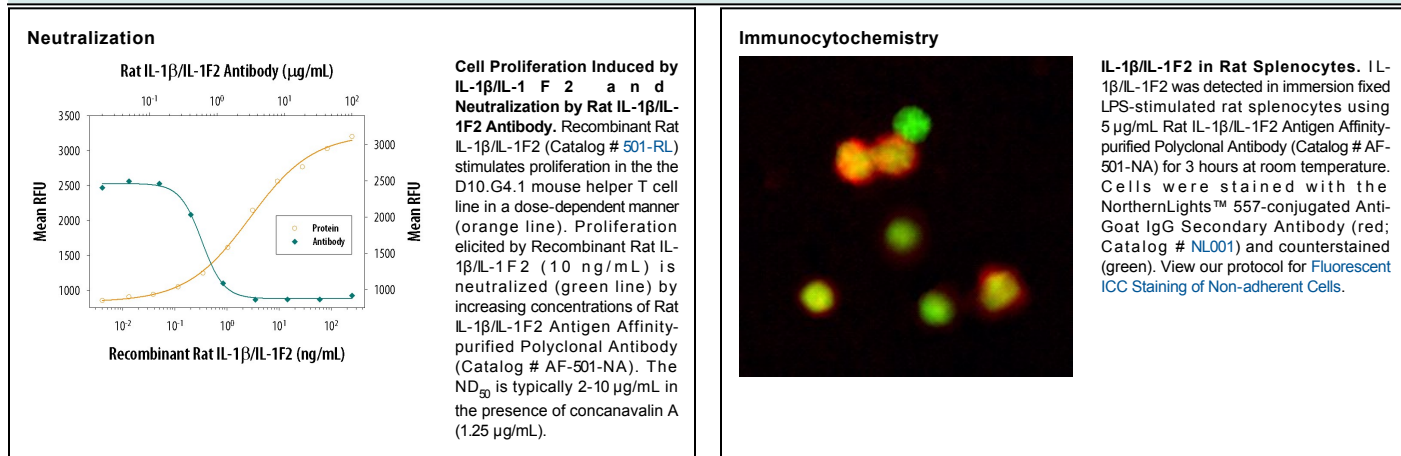
Species Reactivity	Rat
Specificity	Detects rat IL-1 β /IL-1F2 in ELISAs and Western blots. In sandwich immunoassays, less than 1% cross-reactivity with recombinant mouse IL-1 β is observed and less than 0.5% cross-reactivity with recombinant human IL-1 β and recombinant porcine IL-1 β is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant rat IL-1 β /IL-1F2 (R&D Systems, Catalog # 501-RL) Val117-Ser268 Accession # Q63264
Endotoxin Level	<0.10 EU per 1 μ g of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μ m 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 μ g/mL	Recombinant Rat IL-1 β /IL-1F2 (Catalog # 501-RL)
Immunocytochemistry	5-15 μ g/mL	See Below
Rat IL-1β/IL-1F2 Sandwich Immunoassay		Reagent
ELISA Capture	0.2-0.8 μ g/mL	Rat IL-1 β /IL-1F2 Antibody (Catalog # AF-501-NA)
ELISA Detection	0.1-0.4 μ g/mL	Rat IL-1 β /IL-1F2 Biotinylated Antibody (Catalog # BAF501)
Standard		Recombinant Rat IL-1 β /IL-1F2 (Catalog # 501-RL)
Neutralization	Measured by its ability to neutralize IL-1 β /IL-1F2-induced proliferation in the D10.G4.1 mouse helper T cell line. Symons, J.A. <i>et al.</i> (1987) in <i>Lymphokines and Interferons, a Practical Approach</i> . Clemens, M.J. <i>et al.</i> (eds): IRL Press. 272. The Neutralization Dose (ND ₅₀) is typically 2-10 μ g/mL in the presence of 10 ng/mL Recombinant Rat IL-1 β /IL-1F2 and 1.25 μ g/mL concanavalin A.	

DATA



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. <ul style="list-style-type: none"> 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.

BACKGROUND

IL-1 is a name that designates two pleiotropic cytokines, IL-1 α (IL-1F1) and IL-1 β (IL-1F2), which are the products of distinct genes. IL-1 α and IL-1 β 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-1 α and IL-1 β are regulated independently, they bind to the same receptor and exert identical biological effects. IL-1 RI binds directly to IL-1 α or IL-1 β 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-1 β but functions as a decoy receptor and negative regulator of IL-1 β activity. IL-1ra functions as a competitive antagonist by preventing IL-1 α and IL-1 β from interacting with IL-1 RI. The rat IL-1 β cDNA encodes a 268 aa precursor. A 116 aa propeptide is cleaved intracellularly by the cysteine protease IL-1 β -converting enzyme (Caspase-1/ICE) to generate the active cytokine. The 17 kDa mature rat IL-1 β shares 90% aa sequence identity with cotton rat and mouse and 65-77% with canine, equine, feline, human, porcine, and rhesus macaque IL-1 β .