

DESCRIPTION

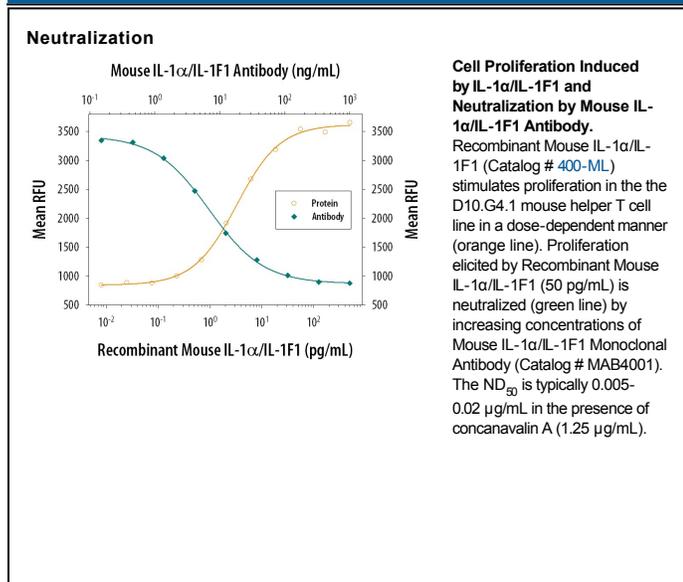
Species Reactivity	Mouse
Specificity	Detects mouse IL-1 α in direct ELISAs and Western blots. In direct ELISAs, 100% and 30% cross-reactivity was observed with cotton rat IL-1 α and rat IL-1 α , respectively, and no cross-reactivity with recombinant human (rh) IL-1 α , rIL-1 α , rIL-1 β , or rIL-18 was observed.
Source	Monoclonal Hamster IgG Clone # ALF161
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant mouse IL-1 α
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	1 μ g/mL	Recombinant Mouse IL-1 α /IL-1F1 (Catalog # 400-ML)
Neutralization	Measured by its ability to neutralize IL-1 α /IL-1F1-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 0.005-0.02 μ g/mL in the presence of 50 pg/mL Recombinant Mouse IL-1 α /IL-1F1 and 1.25 μ g/mL concanavalin A.	
Immunoprecipitation	Fuhbrigge, R. <i>et al.</i> (1988) <i>J. Immunol.</i> 141 :2643.	

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 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	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <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 proteins, IL-1 α and IL-1 β , that are the products of distinct genes, but recognize the same cell surface receptors. IL-1 α and IL-1 β are structurally related polypeptides that show approximately 25% homology at the amino acid level. Both proteins are produced by a wide variety of cells in response to stimuli such as those produced by inflammatory agents, infections, or microbial endotoxins. The proteins are synthesized as 31 kDa precursors that are subsequently cleaved into proteins with molecular weights of approximately 17.5 kDa. The specific protease responsible for the processing of IL-1 β , designated interleukin 1 β -converting enzyme (ICE), has been described. Mature human and mouse IL-1 β share approximately 75% amino acid sequence identity and human IL-1 β has been found to be active on murine cell lines.

IL-1 α and IL-1 β are potent pro-inflammatory cytokines that induce a wide variety of biological activities on different cell types. Two distinct types of IL-1 receptors have been identified and cloned from human and mouse cells. The IL-1 receptor type I is a 80 kDa transmembrane protein with demonstrated IL-1 signaling function. The IL-1 receptor type II is a 68 kDa membrane protein with a relatively short cytoplasmic tail and has no signaling function. The type II receptor acts as a decoy target for IL-1, inhibiting IL-1 activities by preventing the binding of IL-1 to the type I receptor. A soluble version of the type II receptor is induced by anti-inflammatory agents such as glucocorticoids, IL-4 and IL-13.