

DESCRIPTION

Source	<i>E. coli</i> -derived Ser6-Ser161 Accession # Q62161
N-terminal Sequence Analysis	Ser6
Predicted Molecular Mass	18 kDa

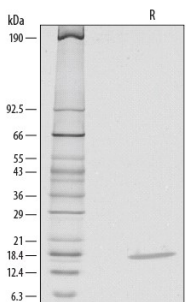
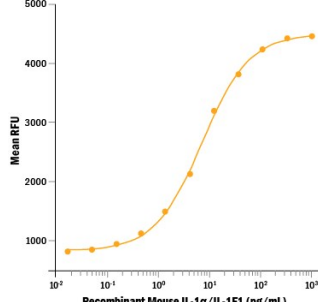
SPECIFICATIONS

Activity	Measured in a cell proliferation assay using D10.G4.1 mouse helper T cells. Symons, J.A. <i>et al.</i> (1987) in <i>Lymphokines and Interferons</i> , a Practical Approach. Clemens, M.J. <i>et al.</i> (eds): IRL Press. 272. The ED ₅₀ for this effect is typically 3-7 pg/mL.
Endotoxin Level	<0.01 EU per 1 μ g of the protein by the LAL method.
Purity	>97%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 50 μ g/mL in sterile PBS containing at least 0.1% human or bovine serum albumin.
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. <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. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA

<p>SDS-PAGE</p>  <p>1 μg/lane of Recombinant Mouse IL-1α/IL-1F1 was resolved with SDS-PAGE under reducing (R) conditions and visualized by silver staining, showing a single band at 18 kDa.</p>	<p>Bioactivity</p>  <p>Recombinant Mouse IL-1α/IL-1F1 (Catalog # 400-ML) stimulates cell proliferation of the D10.G4.1 mouse helper T cell line. The ED₅₀ for this effect is typically 3-7 pg/mL.</p>
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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.