

DESCRIPTION

Source *E. coli*-derived
Val118-Ser269, with an N-terminal Met
Accession # NP_032387

N-terminal Sequence Analysis Met

Predicted Molecular Mass 17 kDa

SPECIFICATIONS

Activity Measured in a cell proliferation assay using D10.G4.1 mouse helper T cells. Symons, J.A. *et al.* (1987) in *Lymphokines and Interferons*, a Practical Approach. Clemens, M.J. *et al.* (eds): IRL Press. 272.
The ED₅₀ for this effect is typically 2-10 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 Supplied as a 0.2 μ m filtered solution in PBS. See Certificate of Analysis for details.

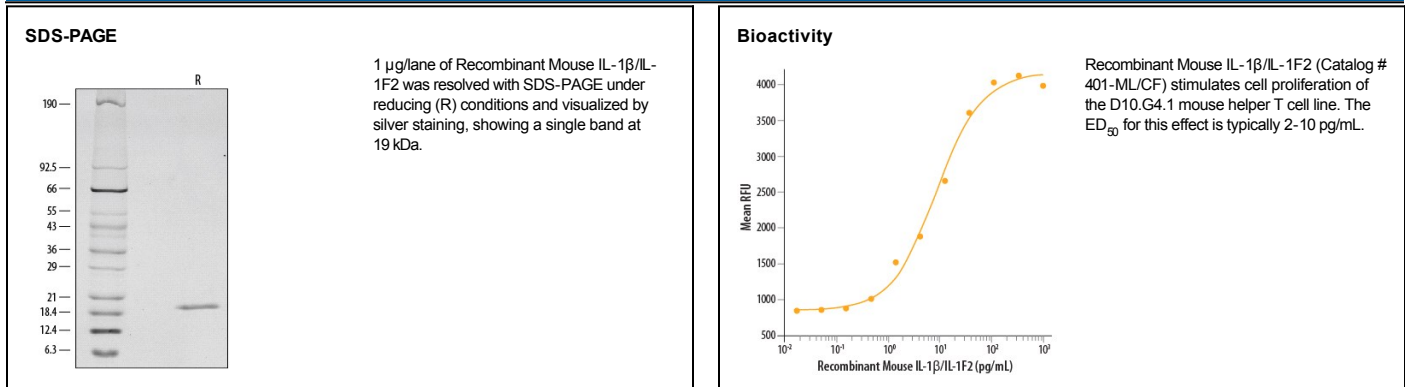
PREPARATION AND STORAGE

Shipping The product is shipped with dry ice or equivalent. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 6 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after opening.
- 3 months, -20 to -70 °C under sterile conditions after opening.

DATA



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 17% amino acid (aa) identity in mouse. 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 (1-4). The mouse IL-1 β cDNA encodes a 269 aa precursor. A 117 aa propeptide is cleaved intracellularly by the cysteine protease IL-1 β -converting enzyme (Caspase-1/ICE) to generate the active cytokine (5, 6). The 17 kDa mature mouse IL-1 β shares 90% aa sequence identity with cotton rat and rat and 65%-78% identity with canine, equine, feline, human, porcine, and rhesus IL-1 β .

References:

1. Allan, S.M. *et al.* (2005) *Nat. Rev. Immunol.* **5**:629.
2. Boraschi, D. and A. Tagliabue (2006) *Vitam. Horm.* **74**:229.
3. Kornman, K.S. (2006) *Am. J. Clin. Nutr.* **83**:475S.
4. Isoda, K. and F. Ohsuzu (2006) *J. Atheroscler. Thromb.* **13**:21.
5. Gray, P.W. *et al.* (1986) *J. Immunol.* **137**:3644.
6. Martinon, F. and J. Tschopp (2007) *Cell Death Differ.* **14**:10.