

Catalog Number: 406-ML

DESCRIPTION	
Source	<i>E. coli</i> -derived mouse IL-6 protein Phe25-Thr211, with an N-terminal Met Accession # P08505
N-terminal Sequence Analysis	Phe25
Predicted Molecular Mass	21.8 kDa

SPECIFICATIONS	
Activity	Measured in a cell proliferation assay using T1165.85.2.1 mouse plasmacytoma cells. Nordan, R.P. <i>et al</i> . (1987) J. Immunol. 139 :813. The ED ₅₀ for this effect is 10.0-100 pg/mL.
Endotoxin Level	<0.10 EU per 1 μ g of the protein by the LAL method.
Purity	>97%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 μm filtered solution in Sodium Acetate and EDTA with Trehalose and with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE	
Reconstitution	Reconstitute at 100 µg/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.
	 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.



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Recombinant Mouse IL-6

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BACKGROUND

Interleukin-6 (IL-6) is a pleiotropic, α -helical, 22 - 28 kDa phosphorylated and variably glycosylated cytokine that plays important roles in the acute phase reaction, inflammation, hematopoiesis, bone metabolism, and cancer progression (1 - 5). Mature mouse IL-6 is 187 amino acids (aa) in length and shares 39% and 85% aa sequence identity with human and rat IL-6, respectively (6 - 8). IL-6 induces signaling through a cell surface heterodimeric receptor complex composed of a ligand binding subunit (IL-6 R alpha) and a signal transducing subunit (gp130). IL-6 binds to IL-6 Ra, triggering IL-6 Ra association with gp130 and gp130 dimerization (9). gp130 is also a component of the receptors for CLC, CNTF, CT-1, IL-11, IL-27, LIF, and OSM (10). Soluble forms of IL-6 Ra are generated by both alternative splicing and proteolytic cleavage (5). In a mechanism known as trans-signaling, complexes of soluble IL-6 and IL-6 Ra elicit responses from gp130-expressing cells that lack cell surface IL-6 Ra (5). Trans-signaling enables a wider range of cell types to respond to IL-6, as the expression of gp130 is ubiquitous, while that of IL-6 Ra but not from other cytokines that use gp130 as a co-receptor (5, 11). IL-6, along with TNF-a and IL-1, drives the acute inflammatory response and the transition from acute inflammatory to either acquired immunity or chronic inflammatory disease (1 - 5). When dysregulated, it contributes to chronic inflammatory molecule, as in skeletal muscle where it is secreted in response to exercise (2). In addition, it enhances hematopoietic stem cell proliferation and the differentiation of Th17 cells, memory B cells, and plasma cells (1, 12).

References:

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