

## DESCRIPTION

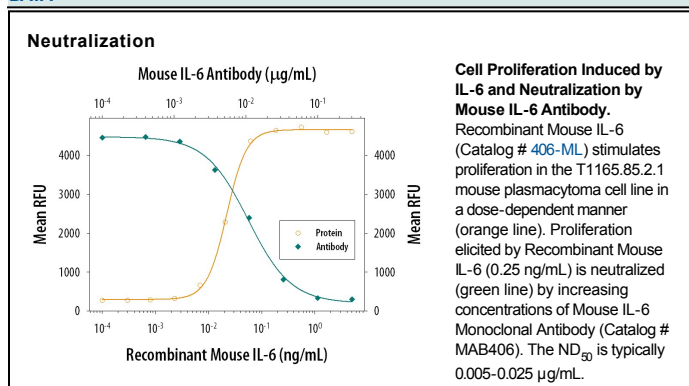
<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse IL-6 in ELISAs and Western blots. In Western blots, no cross-reactivity with recombinant human (rh) IL-6, recombinant porcine IL-6, recombinant rat IL-6, rhIL-11, rhCT-1, or rhCLC is observed.
<b>Source</b>	Monoclonal Rat IgG <sub>1</sub> Clone # MP5-20F3
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	COS-7 African green monkey SV40 transformed kidney fibroblast-like cell line-derived recombinant mouse IL-6
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the antibody by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm 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
<b>Western Blot</b>	1 µg/mL	Recombinant Mouse IL-6 (Catalog # 406-ML)
<b>Mouse IL-6 Sandwich Immunoassay</b>		<b>Reagent</b>
<b>ELISA Capture</b>	2-8 µg/mL	Mouse IL-6 Antibody (Catalog # MAB406)
<b>ELISA Detection</b>	0.1-0.4 µg/mL	Mouse IL-6 Biotinylated Antibody (Catalog # BAF406)
<b>Standard</b>		Recombinant Mouse IL-6 (Catalog # 406-ML)
<b>Neutralization</b>	Measured by its ability to neutralize IL-6-induced proliferation in the T1165.85.2.1 mouse plasmacytoma cell line. Nordan, R.P. <i>et al.</i> (1987) <i>J. Immunol.</i> <b>139</b> :813. The Neutralization Dose (ND <sub>50</sub> ) is typically 0.005-0.025 µg/mL in the presence of 0.25 ng/mL Recombinant Mouse IL-6.	

## DATA



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

#### BACKGROUND

Interleukin 6 (IL-6) is a pleiotropic  $\alpha$ -helical cytokine that plays important roles in acute phase reactions, inflammation, hematopoiesis, bone metabolism, and cancer progression. IL-6 activity is central to the transition from acute inflammation to either acquired immunity or chronic inflammatory disease. It is secreted by multiple cell types as a 22 kDa-28 kDa phosphorylated and variably glycosylated molecule (1-4). Mature mouse IL-6 is 187 amino acids (aa) in length and shares 42% and 85% aa sequence identity with human and rat IL-6, respectively (5). Alternate splicing generates several isoforms with internal deletions (6). Mouse IL-6 is equally active on rat cells (7). IL-6 induces signaling through a cell surface heterodimeric receptor complex composed of a ligand binding subunit (IL-6 R) and a signal transducing subunit (gp130). IL-6 binds to IL-6 R, triggering IL-6 R association with gp130 and gp130 dimerization (8). gp130 is also a component of the receptors for CLC, CNTF, CT-1, IL-11, IL-27, LIF, and OSM (9). Soluble forms of IL-6 R are generated by both alternate splicing and proteolytic cleavage (9). In a mechanism known as trans-signaling, complexes of soluble IL-6 and IL-6 R elicit responses from gp130-expressing cells that lack cell surface IL-6 R (3). 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 R is predominantly restricted to hepatocytes, leukocytes, and lymphocytes (3). Soluble splice forms of gp130 block trans-signaling from IL-6/IL-6 R but not from other cytokines that utilize gp130 as a coreceptor (4, 10).

#### References:

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