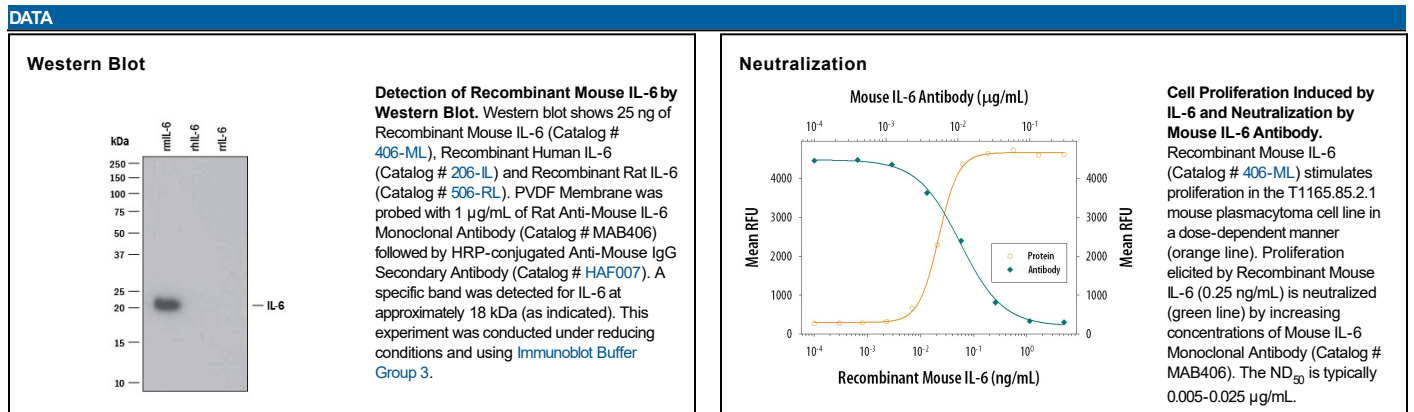


DESCRIPTION	
<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse IL-6 in ELISAs and Western blots. In Western blots, no cross-reactivity with recombinant human (rh) IL-6, recombinant porcine IL-6, recombinant rat IL-6, rhIL-11, rhCT-1, or rhCLC is observed.
<b>Source</b>	Monoclonal Rat IgG <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 either lyophilized or as a 0.2 µm filtered solution in PBS.

APPLICATIONS		
<i>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.</i>		
	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	1 µg/mL	See Below
<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) J. Immunol. <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.	



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>	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <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:**

1. Van Snick, J. (1990) *Annu. Rev. Immunol.* **8**:253.
2. Hodge, D.R. *et al.* (2005) *Eur. J. Cancer* **41**:2502.
3. Jones, S.A. (2005) *J. Immunol.* **175**:3468.
4. Rose-John, S. *et al.* (2006) *J. Leukoc. Biol.* **80**:227.
5. Van Snick, J. *et al.* (1988) *Eur. J. Immunol.* **18**:193.
6. Yatsenko, O.P. *et al.* (2004) *Cytokine* **28**:190.
7. Chiu, C.P. *et al.* (1988) *Proc. Natl. Acad. Sci.* **85**:7099.
8. Murakami, M. *et al.* (1993) *Science* **260**:1808.
9. Muller-Newen, G. (2003) *Sci. STKE* **2003**:PE40.
10. Mitsuyama, K. *et al.* (2006) *Clin. Exp. Immunol.* **143**:125.