

**DESCRIPTION**

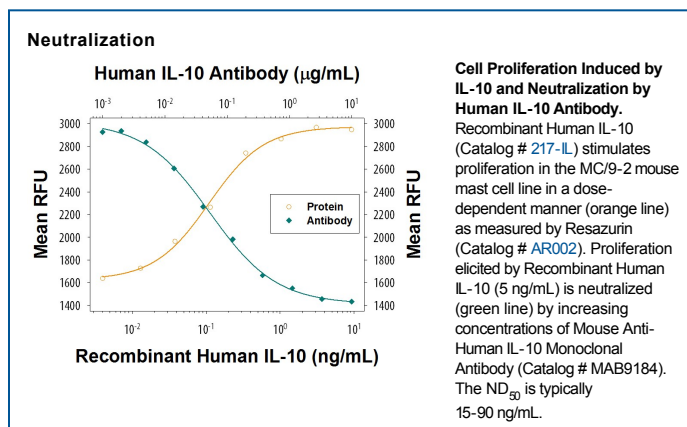
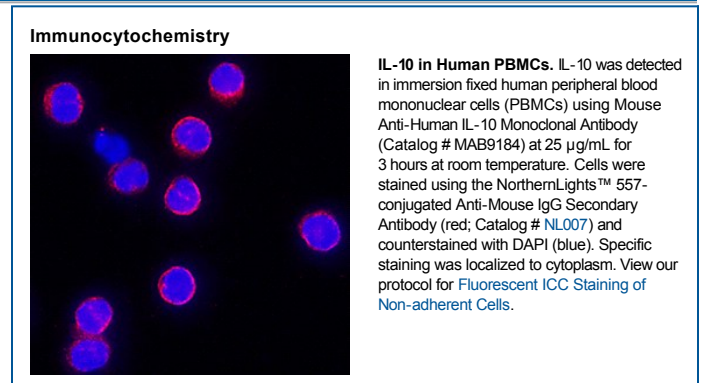
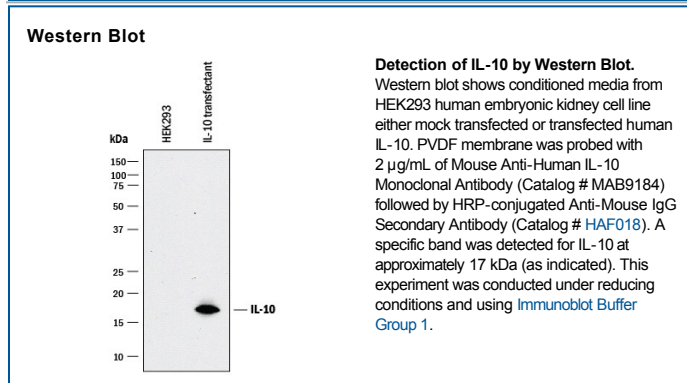
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human IL-10 in direct ELISAs and Western blots.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 948505
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>S. frugiperda</i> insect ovarian cell line Sf21-derived recombinant human IL-10 Met1-Asn178 Accession # P22301
<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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	2 µg/mL	See Below
<b>Immunocytochemistry</b>	5-25 µg/mL	See Below
<b>Neutralization</b>	Measured by its ability to neutralize IL-10-induced proliferation in the MC/9-2 mouse mast cell line. The Neutralization Dose (ND <sub>50</sub> ) is typically 15-90 ng/mL in the presence of 5 ng/mL Recombinant Human IL-10.	

**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 10, also known as cytokine synthesis inhibitory factor (CSIF), is the charter member of the IL-10 family of  $\alpha$ -helical cytokines that also includes IL-19, IL-20, IL-22, IL-24, and IL-26/AK155 (1, 2). IL-10 is secreted by many activated hematopoietic cell types as well as hepatic stellate cells, keratinocytes, and placental cytotrophoblasts (2-5). Mature human IL-10 shares 72%-86% amino acid sequence identity with bovine, canine, equine, feline, mouse, ovine, porcine, and rat IL-10. Whereas human IL-10 is active on mouse cells, mouse IL-10 does not act on human cells (6, 7). IL-10 is a 178 amino acid molecule that contains two intrachain disulfide bridges and is expressed as a 36 kDa noncovalently associated homodimer (6, 8, 9). The IL-10 dimer binds to two IL-10 R $\alpha$ /IL-10 R1 chains, resulting in recruitment of two IL-10 R $\beta$ /IL-10 R2 chains and activation of a signaling cascade involving JAK1, TYK2, and STAT3 (10). IL-10 R $\beta$  does not bind IL-10 by itself but is required for signal transduction (1). IL-10 R $\beta$  also associates with IL-20 R $\alpha$ , IL-22 R $\alpha$ , or IL-28 R $\alpha$  to form the receptor complexes for IL-22, IL-26, IL-28, and IL-29 (11-13). IL-10 is a critical molecule in the control of viral infections and allergic and autoimmune inflammation (14-16). It promotes phagocytic uptake and Th2 responses but suppresses antigen presentation and Th1 proinflammatory responses (2).

**References:**

1. Pestka, S. *et al.* (2004) *Annu. Rev. Immunol.* **22**:929.
2. O'Garra, A. and P. Vieira (2007) *Nat. Rev. Immunol.* **7**:425.
3. Mathurin, P. *et al.* (2002) *Am. J. Physiol. Gastrointest. Liver Physiol.* **282**:G981.
4. Grewe, M. *et al.* (1995) *J. Invest. Dermatol.* **104**:3.
5. Szonyi, B.J. *et al.* (1999) *Mol. Hum. Reprod.* **5**:1059.
6. Vieira, P. *et al.* (1991) *Proc. Natl. Acad. Sci.* **88**:1172.
7. Hsu, D.-H. *et al.* (1990) *Science* **250**:830.
8. Windsor, W.T. *et al.* (1993) *Biochemistry* **32**:8807.
9. Syto, R. *et al.* (1998) *Biochemistry* **37**:16943.
10. Kotenko, S.V. *et al.* (1997) *EMBO J.* **16**:5894.
11. Kotenko, S.V. *et al.* (2000) *J. Biol. Chem.* **276**:2725.
12. Hor, S. *et al.* (2004) *J. Biol. Chem.* **279**:33343.
13. Sheppard, P. *et al.* (2003) *Nat. Immunol.* **4**:63.
14. Fitzgerald, D.C. *et al.* (2007) *Nat. Immunol.* **8**:1372.
15. Wu, K. *et al.* (2007) *Cell. Mol. Immunol.* **4**:269.
16. Blackburn, S.D. and E.J. Wherry (2007) *Trends Microbiol.* **15**:143.