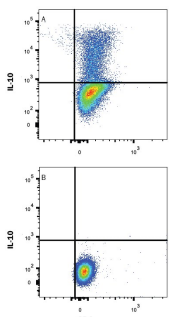
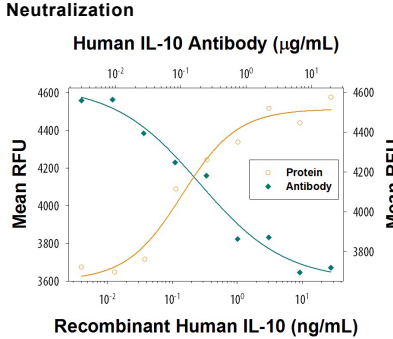


DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human IL-10 in direct ELISAs.
Source	Recombinant Monoclonal Rabbit IgG _{2B} Clone # 2050B
Purification	Protein A or G purified from cell culture supernatant
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human IL-10 Met1-Asn178 Accession # P22301
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	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. <i>General Protocols</i> are available in the <i>Technical Information</i> section on our website.		
	Recommended Concentration	Sample
Flow Cytometry	0.25 µg/10 ⁶ cells	See Below
Neutralization	Measured by its ability to neutralize IL-10-induced proliferation in the MC/9-2 mouse mast cell line. The Neutralization Dose (ND ₅₀) is typically 75-450 ng/mL in the presence of 5 ng/mL Recombinant Human IL-10.	

DATA	
<p>Flow Cytometry</p>  <p>Detection of IL-10 in Human PBMCs by Flow Cytometry. Human peripheral blood mononuclear cells (PBMCs) either (A) stimulated to induce Th2 cells or (B) unstimulated were stained with Rabbit Anti-Human IL-10 Monoclonal Antibody (Catalog # MAB9210) followed by Fluorescein-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # F0112) and Mouse Anti-Human CD4 Alexa Fluor® 700-conjugated Monoclonal Antibody (Catalog # FAB3791N). Quadrant markers were set based on control antibody staining (Catalog # AB-105-C). To facilitate intracellular staining, cells were fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with methanol. View our protocol for Staining Intracellular Molecules.</p>	<p>Neutralization</p>  <p>Cell Proliferation Induced by IL-10 and Neutralization by Human IL-10 Antibody. Recombinant Human IL-10 (Catalog # 217-IL) stimulates proliferation in the MC/9-2 mouse mast cell line in a dose-dependent manner (orange line) as measured by Resazurin (Catalog # AR002). Proliferation elicited by Recombinant Human IL-10 (5 ng/mL) is neutralized (green line) by increasing concentrations of Rabbit Anti-Human IL-10 Monoclonal Antibody (Catalog # MAB9210). The ND₅₀ is typically 75-450</p>

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

BACKGROUND

Interleukin 10, also known as cytokine synthesis inhibitory factor (CSIF), is the charter member of the IL-10 family of α -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 α /IL-10 R1 chains, resulting in recruitment of two IL-10 R β /IL-10 R2 chains and activation of a signaling cascade involving JAK1, TYK2, and STAT3 (10). IL-10 R β does not bind IL-10 by itself but is required for signal transduction (1). IL-10 R β also associates with IL-20 R α , IL-22 R α , or IL-28 R α 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. Sabat, R. *et al.* (2010) *Cytokine Growth Factor Rev.* **21**:331.
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. Szony, 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.