Human IL-10 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF-217-NA

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-10 in direct ELISAs and Western blots. In direct ELISAs, approximately 50% cross-reactivity with recombinant Epstein-Barr virus IL-10 is observed and less than 20% cross-reactivity with recombinant mouse IL-10, recombinant feline IL-10, recombinant porcine IL-10, recombinant equine IL-10, and recombinant rat IL-10 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant human IL-10 Ser19-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 either lyophilized or as a 0.2 µm filtered solution in PBS.

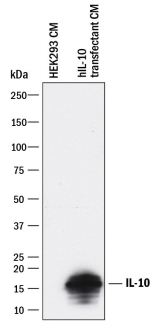
APPLICATIONS

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
Western Blot	1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below
Simple Western	10 µg/mL	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 0.2-1.0 µg/mL in the presence of 5 ng/mL Recombinant Human IL-10.	

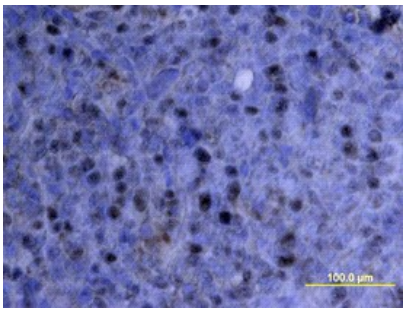
DATA

Western Blot



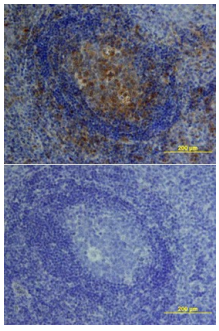
Detection of Human IL-10 by Western Blot. Western blot shows conditioned media of HEK293 human embryonic kidney cell line either mock transfected or transfected with human IL-10. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human IL-10 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-217-NA) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for IL-10 at approximately 16 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



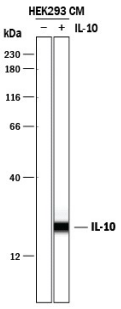
IL-10 in Human Tonsil. IL-10 was detected in immersion fixed paraffin-embedded sections of human tonsil using Goat Anti-Human IL-10 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-217-NA) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

Immunohistochemistry



IL-10 in Human Tonsil. IL-10 was detected in immersion fixed paraffin-embedded sections of human tonsil using Goat Anti-Human IL-10 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-217-NA) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

Simple Western



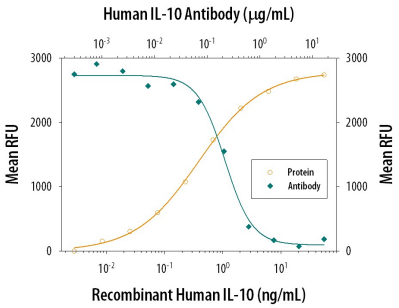
Detection of Human IL-10 by Simple Western™. Simple Western lane view shows conditioned media of HEK293 human embryonic kidney cell line either mock transfected or transfected with human IL-10, loaded at 0.2 mg/mL. A specific band was detected for IL-10 at approximately 23 kDa (as indicated) using 10 µg/mL of Goat Anti-Human IL-10 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-217-NA) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

Human IL-10 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF-217-NA

Neutralization



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). Proliferation elicited by Recombinant Human IL-10 (5 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human IL-10 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-217-NA). The ND_{50} is typically 0.2-1.0 µg/mL.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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.** ● 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 Rα/IL-10 R1 chains, resulting in recruitment of two IL-10 Rβ/IL-10 R2 chains and activation of a signaling cascade involving JAK1, TYK2, and STAT3 (10). IL-10 Rβ does not bind IL-10 by itself but is required for signal transduction (1). IL-10 Rβ also associates with IL-20 Rα, IL-22 Rα, or IL-28 Rα 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. 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.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449