

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human B7-2/CD86 in direct ELISAs and Western blots. In direct ELISAs and Western blots (non-reducing conditions), less than 5% cross-reactivity with recombinant mouse B7-2 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human B7-2/CD86 Extracellular domain
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.

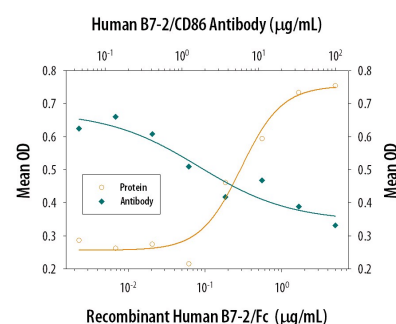
APPLICATIONS

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	0.1 µg/mL	Recombinant Human B7-2/CD86 Fc Chimera (Catalog # 141-B2)
Flow Cytometry	2.5 µg/10 ⁶ cells	Human whole blood monocytes
Immunohistochemistry	5-15 µg/mL	See Below
Neutralization	Measured by its ability to neutralize B7-2/CD86-induced IL-2 secretion in the Jurkat human acute T cell leukemia cell line. Linsley, P. <i>et al.</i> (1990) Proc. Natl. Acad. Sci. 87 :5031. The Neutralization Dose (ND ₅₀) is typically 0.25-1.25 µg/mL in the presence of 2 µg/mL Recombinant Human B7-2/CD86 Fc Chimera and 10 µg/mL PHA.	

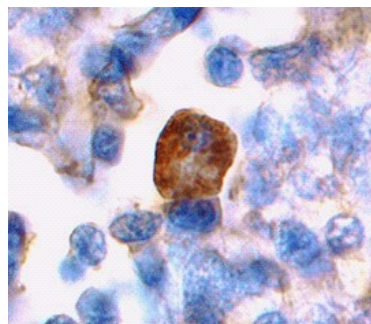
DATA

Neutralization



IL-2 secretion Induced by B7-2/CD86 and Neutralization by Human B7-2/CD86 Antibody. Recombinant Human B7-2/CD86 Fc Chimera (Catalog # [141-B2](#)) co-stimulates IL-2 secretion in the Jurkat human acute T cell leukemia cell line in the presence of PHA in a dose-dependent manner (orange line), as measured by the Human IL-2 Quantikine ELISA Kit (Catalog # [D2050](#)). IL-2 secretion elicited by Recombinant Human B7-2/CD86 Fc Chimera (2 µg/mL) and PHA (10 µg/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human B7-2/CD86 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-141-NA). The ND₅₀ is typically 0.25-1.25 µg/mL.

Immunohistochemistry



B7-2/CD86 in Human Tonsil. B7-2/CD86 was detected in immersion fixed paraffin-embedded sections of human tonsil using Goat Anti-Human B7-2/CD86 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-141-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 immersion fixed paraffin-embedded Tissue Sections](#).

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.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <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

B7-1 and B7-2, together with their receptors CD28 and CTLA-4, constitute one of the dominant costimulatory pathways that regulate T- and B-cell responses. Although both CTLA-4 and CD28 can bind to the same ligands, CTLA-4 binds to B7-1 and B7-2 with a 20-100 fold higher affinity than CD28 and is involved in the down-regulation of the immune response. B7-1 is expressed on activated B cells, activated T cells, and macrophages. B7-2 is constitutively expressed on interdigitating dendritic cells, Langerhans cells, peripheral blood dendritic cells, memory B cells, and germinal center B cells. Additionally, B7-2 is expressed at low levels on monocytes and can be up-regulated through interferon γ . B7-1 and B7-2 are both members of the immunoglobulin superfamily. Human B7-2 is a 329 amino acid (aa) protein containing a putative 23 aa signal peptide, a 224 aa extracellular domain, a 21 aa transmembrane domain, and a 61 aa cytoplasmic domain. Human B7-2 and B7-1 share 26% amino acid identity. Human and mouse B7-2 share 50% amino acid identity. However, it has been observed that both human and mouse B7-1 and B7-2 can bind to either human or mouse CD28 and CTLA-4, suggesting that there are conserved amino acids which form the B7-1/B7-2/CD28/CTLA-4 critical binding sites.

References:

1. Azuma, M. *et al.* (1993) *Nature* **366**:76.
2. Freeman, G.J. *et al.* (1993) *Science* **262**:909.
3. Freeman, G. *et al.* (1991) *J. Exp. Med.* **174**:625.
4. Selvakumar, A. *et al.* (1993) *Immunogenetics* **38**:292.
5. Chen, C. *et al.* (1994) *J. Immunol.* **152**:4929.
6. Freeman, G.J. *et al.* (1993) *J. Exp. Med.* **178**:2185.