

Human B7-1/CD80 Antibody

Antigen Affinity-purified Polyclonal Goat IgG Catalog Number: AF140

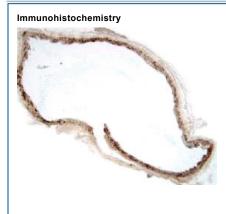
DESCRIPTION			
Species Reactivity	Human		
Specificity	Detects human B7-1/CD80 in direct ELISAs and Western blots. In Western blots, approximately 5% cross-reactivity with recombinant human B7-2 and recombinant mouse B7-2 is observed.		
Source	Polyclonal Goat IgG		
Purification	Antigen Affinity-purified		
Immunogen	S. frugiperda insect ovarian cell line Sf 21-derived recombinant human B7-1/CD80 Extracellular domain		
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 B7-1/CD80 Fc Chimera (Catalog # 140-B1)
Immunohistochemistry	5-15 μg/mL	See Below

DATA



B7-1/CD80 in Human Brain. B7-1/CD80 was detected in immersion fixed paraffinembedded sections of human brain (cross-section through blood vessel) using 15 µg/mL Goat Anti-Human B7-1/CD80 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF140) overnight at 4 °C. Tissue was stained with 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.

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	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

B7-1 and B7-2, together with their receptors CD28 and CTLA-4, constitute one of the dominant co-stimulatory 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 IFN-y. B7-1 and B7-2 are both members of the Immunoglobulin superfamily. Human B7-1 is a 288 amino acid (aa) protein containing a 34 aa signal peptide, a 208 aa extracellular domain, a 21 aa transmembrane domain, and a 25 aa cytoplasmic domain. Human B7-1 and B7-2 share 26% amino acid identity. Human and mouse B7-1 share 44% 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 theB7-1/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.
- Freeman, G.J. et al. (1993) J. Exp. Med. 178:2185.

RED SYSTEMS