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. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

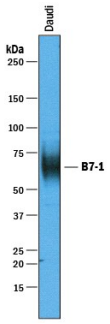
APPLICATIONS

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.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below

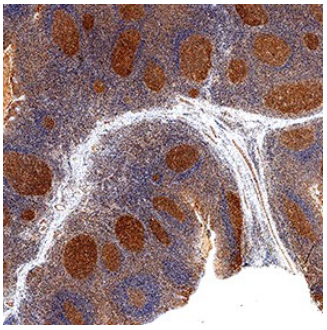
DATA

Western Blot



Detection of Human B7-1/CD80 by Western Blot. Western blot shows lysates of Daudi human Burkitt's lymphoma cell line. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human B7-1/CD80 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF140) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF019). A specific band was detected for B7-1/CD80 at approximately 60 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



B7-1/CD80 in Human Tonsil. B7-1/CD80 was detected in immersion fixed paraffin-embedded sections of human tonsil using Goat Anti-Human B7-1/CD80 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF140) at 3 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). Specific staining was localized to lymphocytes in germinal center. 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. *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

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-γ. 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:

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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.

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