

DESCRIPTION

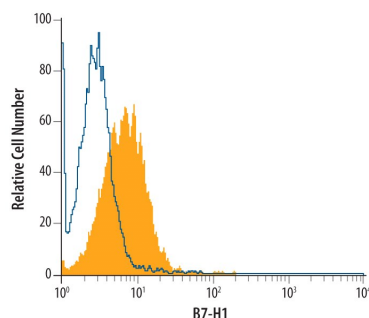
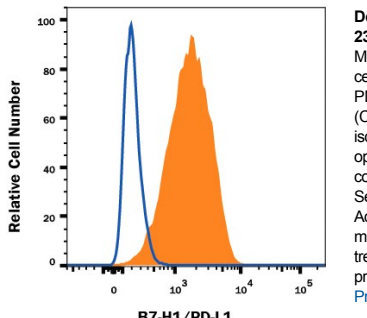
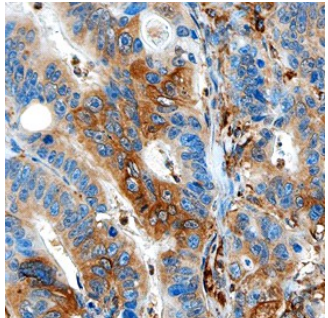
Species Reactivity	Human
Specificity	Detects human PD-L1/B7-H1 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) B7-1, -2, -H2, -H3, -H3b, -H4, rhPD-L2, recombinant mouse B7-H1, recombinant rat (rr) B7-1, or rrB7-2 is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 130021
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human PD-L1/B7-H1 Phe19-Thr239 Accession # Q9NZQ7
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
Flow Cytometry	0.25 µg/10 ⁶ cells	See Below
Immunohistochemistry	8-25 µg/mL	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA

<p>Flow Cytometry</p>  <p>Detection of PD-L1/B7-H1 in Jurkat Human Cell Line by Flow Cytometry. Jurkat human acute T cell leukemia cell line was stained with Mouse Anti-Human PD-L1/B7-H1 Monoclonal Antibody (Catalog # MAB1561, filled histogram) or isotype control antibody (Catalog # MAB002, open histogram), followed by Phycoerythrin-conjugated Anti-Mouse IgG F(ab)₂ Secondary Antibody (Catalog # F0102B). View our protocol for Staining Membrane-associated Proteins.</p>	<p>Flow Cytometry</p>  <p>Detection of PD-L1/B7-H1 in MDA-MB-231 Human Cell Line by Flow Cytometry. MDA-MB-231 human breast adenocarcinoma cell line was stained with Mouse Anti-Human PD-L1/B7-H1 Monoclonal Antibody (Catalog # MAB1561, filled histogram) or isotype control antibody (Catalog # MAB002, open histogram), followed by Phycoerythrin-conjugated Anti-Mouse IgG F(ab)₂ Secondary Antibody (Catalog # F0102B). Adherent cells were prepared by either manual scraping or with TrypLE Express treatment with similar results. View our protocol for Staining Membrane-associated Proteins.</p>
<p>Immunohistochemistry</p>  <p>PD-L1/B7-H1 in Human Colon Cancer. PD-L1/B7-H1 was detected in formalin fixed paraffin-embedded sections of human colon cancer using Mouse Anti-Human PD-L1/B7-H1 Monoclonal Antibody (Catalog # MAB1561) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was observed in the cytoplasm. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.</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

Human B7 homolog 1 (B7-H1), also called programmed death ligand 1 (PD-L1) and programmed cell death 1 ligand 1 (PDCD1L1), is a member of the growing B7 family of immune proteins that provide signals for both stimulating and inhibiting T cell activation. Other family members include B7-1, B7-2, B7-H2, PDL2 and B7-H3. B7 proteins are members of the immunoglobulin (Ig) superfamily. Their extracellular domains contain 2 Ig-like domains and all members have short cytoplasmic domains. Among the family members, there is about 20-25% amino acid identity. Human and mouse B7-H1 share approximately 70% amino acid sequence identity. B7-H1 has been identified as one of two ligands for programmed death-1 (PD-1), a member of the CD28 family of immunoreceptors. The B7-H1 gene encodes a 291 amino acid (aa) type I membrane precursor protein with a putative 18 aa signal peptide, a 220 aa extracellular domain, a 21 aa transmembrane region, and a 31 aa cytoplasmic domain. Human B7-H1 is constitutively expressed in several organs such as heart, skeletal muscle, placenta and lung, and in lower amounts in thymus, spleen, kidney and liver. B7-H1 expression is upregulated in a small fraction of activated T and B cells and a much larger fraction of activated monocytes. B7-H1 expression is also induced in dendritic cells and keratinocytes after IFN- γ stimulation. Interaction of B7-H1 with PD-1 results in inhibition of TCR-mediated proliferation and cytokine production. The B7-H1:PD-1 pathway is involved in the negative regulation of some immune responses and may play an important role in the regulation of peripheral tolerance.

References:

1. Nishimura, H. and T. Honjo (2001) Trends Immunol. **22**:265.
2. Freeman, G.J. *et al.* (2000) J. Exp. Med. **192**:1027.
3. Latchman, Y. *et al.* (2001) Nat. Immunol. **2**:261.