

Human PD-L1/B7-H1 APC-conjugated Antibody

Monoclonal Mouse IgG₁ Clone # 130021

Catalog Number: FAB1561A 100 Tests, 25 Tests

DESCRIPTION			
Species Reactivity	Human		
Specificity	Detects human B7-H1/PD-L1 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 B7-H1/PD-L1 Phe19-Thr239 Accession # Q9NZQ7		
Conjugate	Allophycocyanin Excitation Wavelength: 620-650 nm Emission Wavelength: 660-670 nm		
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.		
	*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data She (SDS) for additional information and handling instructions.		

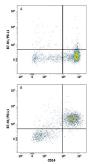
APPLICATIONS

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.

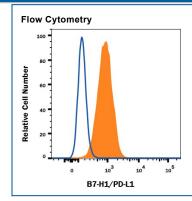
	Recommended Concentration	Sample
Flow Cytometry	10 μL/10 ⁶ cells	See Below

DATA

Flow Cytometry



Detection of B7-H1/PD-L1 in Human PBMCs by Flow Cytometry. Human peripheral blood mononuclear cells (PBMCs) (A) resting or (B) treated with 1 µg/mL LPS overnight were stained with Mouse Anti-Human CD14 PE-conjugated Monoclonal Antibody (Catalog # FAB3832P) and Mouse Anti-Human B7-H1/PD-L1 APC-conjugated Monoclonal Antibody (Catalog # FAB1561A). Quadrant markers were set based on control antibody staining (Catalog # IC002A). View our protocol for Staining Membrane-associated Proteins.



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 APC-conjugated Monoclonal Antibody (Catalog # FAB1561A, filled histogram) or isotype control antibody (Catalog # IC002A, open histogram). Adherent cells were prepared by either manual scraping or with TrypLE Express treatment with similar results. View our protocol for Staining Membrane-associated Proteins.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage

Protect from light. Do not freeze.

• 12 months from date of receipt, 2 to 8 °C as supplied.

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.

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