Human PD-L1/B7-H1 APC-conjugated Antibody
Monoclonal Mouse IgG, 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 (r) B7-1, or rB7-2 is observed.

**Source** Monoclonal Mouse IgG, 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 Sheet (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.

<table>
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<tr>
<th>Flow Cytometry</th>
<th>Recommended Concentration</th>
<th>Sample</th>
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<td>10 µL/10^6 cells</td>
<td>See Below</td>
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**DATA**

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 # FAB9562P) 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 family of immune proteins 1 (B7-H1), also called programmed death ligand 1 (PD-L1) and programmed cell death 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:**

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