

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human B7-H1 in direct ELISAs and Western blots. In direct ELISAs, this antibody shows no cross-reactivity with recombinant human (rh) B7-1, rhB7-2, rhB7-H2, rhB7-H3, rmB7-H1, or rmPD-L2.
<b>Source</b>	Monoclonal Mouse IgG <sub>2A</sub> Clone # 130002
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human B7-H1 Phe19-Thr239 Accession # Q9NZQ7
<b>Formulation</b>	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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	1 µg/mL	Recombinant Human B7-H1/PD-L1 Fc Chimera (Catalog # 156-B7)

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>1 month from date of receipt, 2 to 8 °C, reconstituted.</li> <li>6 months from date of receipt, -20 to -70 °C, reconstituted.</li> </ul>

## BACKGROUND

Human B7 homolog 1 (B7-H1), also called programmed cell death 1 ligand 1 (PDCD1L1) and programmed death ligand 1 (PDL1), 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, they share 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 290 amino acid (aa) type I membrane precursor protein with a putative 18 aa signal peptide, a 221 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 in Immunology **22**:265.
2. Freeman, G.J. *et al.* (2000) J. Exp. Med. **192**:1027.
3. Latchman, Y. *et al.* (2001) Nat. Immunol. **2**:261.