

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse B7-H1/PD-L1 in direct ELISAs and Western blots. In direct ELISAs, approximately 20% cross-reactivity with recombinant human B7-H1 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse B7-H1/PD-L1 Phe19-Thr238 Accession # Q9EP73
Formulation	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.

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Mouse B7-H1/PD-L1 Fc Chimera (Catalog # 1019-B7)
Flow Cytometry	2.5 µg/10 ⁶ cells	Mouse splenocytes
Immunohistochemistry	5-15 µg/mL	Perfusion fixed frozen sections of mouse small intestine (Peyer's patch) and thymus

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.
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

Mouse 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 B7 family of proteins that provide signals for regulating T-cell activation and tolerance (1-4). Other family members include B7-1, B7-2, B7-H2, B7-H3 and PD-L2. B7 proteins are immunoglobulin (Ig) superfamily members with extracellular Ig-V-like and Ig-C-like domains and a short cytoplasmic region. Among the family members, they share from 20-40% amino acid (aa) sequence identity. The cloned mouse B7-H1/PD-L1 cDNA encodes a 290 aa type I membrane precursor protein with a putative 18 aa signal peptide, a 220 aa extracellular region containing one V-like and one C-like Ig domain, a 22 aa transmembrane region, and a 30 aa cytoplasmic domain. Mouse and human B7-H1/PD-L1 share approximately 70% aa sequence identity. B7-H1/PD-L1 is one of two ligands for programmed death-1 (PD-1), a member of the CD28 family of immunoreceptors. The other identified ligand is PD-L2. Mouse B7-H1/PD-L1 and PD-L2 share approximately 34% aa sequence identity and have similar functions. B7-H1/PD-L1 is constitutively expressed in various lymphoid and non-lymphoid organs including placenta, heart, pancreas, lung, liver, and endothelium (1-4). The expression of B7-H1/PD-L1 is detected on B cells, T cells, monocytes, dendritic cells and thymic epithelial cells. IFN-γ treatment induces B7-H1/PD-L1 expression in monocytes, dendritic cells, and endothelial cells. B7-H1/PD-L1 expression is also upregulated in a variety of tumor cell lines. On previously activated T cells, B7-H1/PD-L1 interaction with PD-1 inhibits TCR-mediated proliferation and cytokine production, suggesting an inhibitory role in regulating immune responses. In contrast, a costimulatory function for the PD-1 ligands on resting T cells has also been reported (1-4).

References:

1. Tamura, H. *et al.* (2001) *Blood* **97**:1809.
2. Freeman, G. *et al.* (2000) *J. Exp. Med.* **192**:1027.
3. Sharpe, A.H. and G. J. Freeman (2002) *Nat. Rev. Immunol.* **2**:116.
4. Coyle, A. and J. Gutierrez-Ramos (2001) *Nat. Immunol.* **2**:203.