Mouse PD-L2/B7-DC
Alexa Fluor® 647-conjugated Antibody

Monoclonal Rat IgG_{2A} Clone # 168633

Catalog Number: FAB1022R

100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse PD-L2/B7-DC in direct ELISAs and Western blots. In direct ELISAs and Western blots, 100% cross-reactivity with recombinant human (rh) PD-L2 is observed and no cross-reactivity with rhB7-1, recombinant mouse (rm) B7-1, rmB7-2, rmB7-H1, rmB7-H2, rmB7-H3, or rmB7-H4 is observed.
Source	Monoclonal Rat IgG_{2A} Clone # 168633
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse PD-L2/B7-DC Met1-Arg219 Accession # Q9WUL5
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2 mg/mL 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.*

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10^6 cells	HEK293 human embryonic kidney cell line transfected with mouse PD-L2/B7-DC

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

Mouse Programmed Death Ligand 2 (PD-L2), also named B7DC and butyrophilin-like protein, 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, PD-L1 (B7-H1), and B7-H3. B7 proteins are immunoglobulin (Ig) superfamily members with extracellular Ig-V-like and Ig-C-like domains and short cytoplasmic domains. Among the family members, they share from 20-40% amino acid (aa) sequence identity. The cloned mouse PD-L2 cDNA encodes a 247 aa type I membrane precursor protein with a putative 20 aa signal peptide, a 199 aa extracellular region containing one V-like and one C-like Ig domain, a 23 aa transmembrane region, and only a 5 aa cytoplasmic domain. The extracellular domains of mouse and human PD-L2 share approximately 72% aa sequence identity. PD-L2 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-L1. Mouse PD-L1 and PD-L2 share approximately 34% aa sequence identity and have similar functions. PD-L2 is constitutively expressed in lymphoid and non-lymphoid organs (1-4). The expression of PD-L2 is detected on dendritic cells, thymic epithelial cells and IFN-γ treated monocytes. PD-L2 expression is also upregulated in a variety of tumor cell lines. On previously activated T cells, PD-L2 interaction with PD-1 inhibits TCR-mediated proliferation and cytokine production, suggesting an inhibitory role in regulating immune responses. In contrast, a co-stimulatory function for the PD-1 ligands on resting T cells has also been reported.

References:

1. Latchman, Y. *et al.* (2001) Nature Immun. **2**:261.
2. Tseng, B.S-Y. *et al.* (2001) J. Exp. Med. **193**:839.
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.

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