Mouse B7-2/CD86
Alexa Fluor® 488-conjugated Antibody

Monoclonal Rat IgG_{2A} Clone # GL1

Catalog Number: FAB741G
100 TESTS

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse B7–2/CD86 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant mouse B7-1, recombinant human (rh) B7-1 or rhB7-2 is observed.
Source	Monoclonal Rat IgG_{2A} Clone # GL1
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	LPS-activated mouse B cells
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 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.

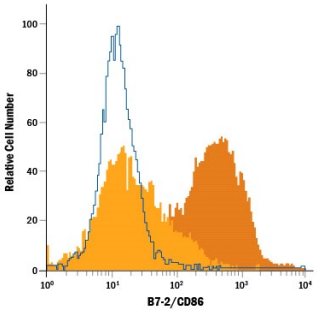
APPLICATIONS

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.*

	Recommended Concentration	Sample
Flow Cytometry	5 µL/10^6 cells	See Below

DATA

Flow Cytometry



Detection of B7-2/CD86 in Mouse Splenocytes by Flow Cytometry. Mouse splenocytes, untreated (light orange histogram), or treated with 1 µg/mL LPS for 3 days (dark orange histogram), were stained with Rat Anti-Mouse B7-2/CD86 Alexa Fluor® 488-conjugated Monoclonal Antibody (Catalog # FAB741G, filled histogram) or isotype control antibody (Catalog # IC006G, open histogram). 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

B7-1 and B7-2, together with their receptors CD28 and CTLA-4, constitute one of the dominant costimulatory pathways that regulate T- and B-cell responses. Although both CTLA-4 and CD28 can bind to the same ligands, CTLA-4 binds to B7-1 and B7-2 with a 20–100 fold higher affinity than CD28 and is involved in the down–regulation of the immune response. B7-1 is expressed on activated B cells, activated T cells, and macrophages. B7-2 is constitutively expressed on interdigitating dendritic cells, Langerhans cells, peripheral blood dendritic cells, memory B cells, and germinal center B cells. Additionally, B7-2 is expressed at low levels on monocytes and can be up–regulated through interferon γ. B7-1 and B7-2 are both members of the immunoglobulin superfamily. Mouse B7-2 is a 309 amino acid (aa) protein containing a putative 23 aa signal peptide, a 221 aa extracellular domain, a 21 aa transmembrane domain, and a 44 aa cytoplasmic domain. Mouse B7-2 and B7-1 share 28% amino acid identity. Mouse and human B7-2 share 50% amino acid identity. However, it has been observed that both human and mouse B7–1 and B7–2 can bind to either human or mouse CD28 and CTLA-4, suggesting that there are conserved amino acids which form the B7-1/B7-2/CD28/CTLA-4 critical binding sites.

References:

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3. Freeman, G. *et al.* (1991) J. Exp. Med. **174**:625.
4. Selvakumar, A. *et al.* (1993) Immunogenetics **38**:292.
5. Chen, C. *et al.* (1994) J. Immunol. **152**:4929.
6. Freeman, G.J. *et al.* (1993) J. Exp. Med. **178**:2185.

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