RD SYSTEMS a biotechne brand

Mouse B7-1/CD80 Antibody

Recombinant Monoclonal Rabbit IgG Clone # 2740B Catalog Number: MAB7401

DESCRIPTION	
Species Reactivity	Mouse
Specificity	Detects mouse B7-1/CD80 in direct ELISAs.
Source	Recombinant Monoclonal Rabbit IgG Clone # 2740B
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse B7-1/CD80 Val38-Asn246 Accession # Q00609
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

APPLICATIONS

Flow Cytometry

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.		s are available in the Technical Information section on our website.
	Recommended Concentration	Sample
Flow Cytometry	0.25 µg/10 ⁶ cells	Mouse splenocytes treated with 200 ng/mL LPS

DATA

Detection of B7-1/CD80 in Mouse Splenocytes by Flow Cytometry. Mouse splenocytes, (A) treated with 200 ng/mL LPS for 16 hr, or (B) resting, were stained with Rabbit Anti-Mouse B7-1/CD80 Monocional Antibody (Catalog # MAB7401) followed by APCconjugated Anti-Rabbit IgG Secondary Antibody (Catalog # F0111) and Rat anti-Mouse B220 PE-conjugated Monocional Antibody (Catalog # FAB1217P). Quadrant markers were set based on isotype control antibody (Catalog # MAB1050, data not shown). Staining was done using our Staining Membrane-associated Proteins protocol.

PREPARATION AND S	
Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
	*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 $^\circ$ C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
	 12 months from date of receipt, -20 to -70 °C as supplied.
	 1 month, 2 to 8 °C under sterile conditions after reconstitution.
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• 6 months, -20 to -70 °C under sterile conditions after reconstitution

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 y. B7-1 and B7-2 are both members of the immunoglobulin superfamily. Mouse B7-1 is a 306 amino acid (aa) protein containing a putative 37 aa signal peptide, a 190 aa extracellular domain, a 22 aa transmembrane domain, and a 38 aa cytoplasmic domain. Mouse B7-1 and B7-2 share 28% amino acid identity. Mouse and human B7-1 share 44% 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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- 4. Selvakumar, A. et al. (1993) Immunogenetics 38:292
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