Human B7-H2 Antibody

Monoclonal Mouse IgG_{2B} Clone # 136716

Catalog Number: MAB1651

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human B7-H2 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human (rh) B7-1, rhB7-2, rhB7-H1, rhB7-H3, recombinant mouse (rm) B7-H2, or rmPD-L2 is observed.
Source	Monoclonal Mouse IgG_{2B} Clone # 136716
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human B7-H2 Asp19-Ser258 Accession # O75144
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
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 as a 0.2 µm filtered solution in PBS.

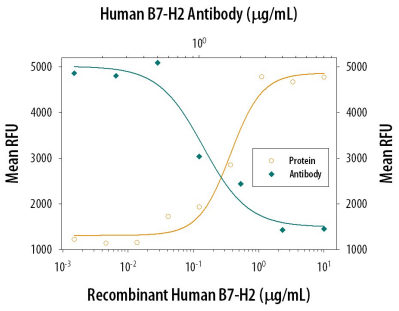
APPLICATIONS

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	1 µg/mL	Recombinant Human B7-H2 Fc Chimera (Catalog # 165-B7)
Neutralization	Measured by its ability to neutralize B7–H2-induced proliferation in PHA-activated human T cells. Wang, S. *et al.* (2000) Blood **96**:2808. The Neutralization Dose (ND_{50}) is typically 1-4 µg/mL in the presence of 3 µg/mL Recombinant Human B7–H2 Fc Chimera and 20 ng/mL Human CD3ε Monoclonal Antibody .	

DATA

Neutralization



Cell Proliferation Induced by B7-H2 and Neutralization by Human B7-H2 Antibody. In the presence of Human CD3ε Monoclonal Antibody (20 ng/mL, Catalog # MAB100), Recombinant Human B7-H2 Fc Chimera (Catalog # 165-B7) stimulates proliferation in PHA-activated human T cells in a dose-dependent manner (orange line). Under these conditions, proliferation elicited by Rec-ombinant Human B7-H2 Fc Chimera (3 µg/mL) is neutralized (green line) by increasing concentrations of Mouse Anti-Human B7-H2 Monoclonal Antibody (Catalog # MAB1651). The ND_{50} is typically 1-4 µg/mL.

PREPARATION AND STORAGE

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 °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. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

Human B7-H2, also called B7RP-1, B7h, LICOS, and GL50, is a 60 kDa member of the B7 family of immune costimulatory proteins, which includes B7-1, B7-2, B7-H1 (PD-L1), PD-L2, and B7-H3. B7 proteins are members of the immunoglobulin (Ig) superfamily; the extracellular domains contain 2 Ig-like domains and all members have short cytoplasmic domains. Family members share about 20-25% amino acid identity. Within the extracellular domain, human B7-H2 shares 49% and 54% amino acid sequence identity with mouse and rat B7-H2, respectively. B7-H2 has been identified as the ligand for ICOS, a member of the CD28 family of costimulatory receptors. Human B7-H2 is a 309 amino acid (aa) protein with a putative 18 aa signal peptide, a 239 aa extracellular domain, an 18 aa transmembrane region, and a 33 aa cytoplasmic domain. Human B7-H2 is expressed constitutively on resting B cells, dendritic cells, and at low levels on monocytes. The B7-H2/ICOS interaction appears to play roles in T cell dependent B cell activation and T_h differentiation.

References:

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3. Wang, S. *et al.* (2000) Blood **96**:2808.
4. Brodie, D. *et al.* (2000) Curr. Biol. **10**:333.
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6. Swallow, M.M. *et al.* (1999) Immunity **11**:423.
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