

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human B7-H2 in direct ELISAs. In direct ELISAs and Western blots, no cross-reactivity with recombinant human (rh) B7-1, rhB7-2, rhB7-H1, rhB7-H3, or recombinant mouse B7-H2 is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 136726
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
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	U937 human histiocytic lymphoma cell line

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. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

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:

1. Coyle, A.J. and J.C. Gutierrez-Ramos (2001) *Nat. Immunol.* **2**:203.
2. Ling, V. *et al.* (2000) *J. Immunol.* **164**:1653.
3. Wang, S. *et al.* (2000) *Blood* **96**:2808.
4. Brodie, D. *et al.* (2000) *Curr. Biol.* **10**:333.
5. Mages, H.W. *et al.* (2000) *Eur. J. Immunol.* **30**:1040.
6. Swallow, M.M. *et al.* (1999) *Immunity* **11**:423.
7. Yoshinaga, S.K. *et al.* (1999) *Nature* **402**:827.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.