

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human B7-H7/HHLA2 in direct ELISAs.
Source	Monoclonal Mouse IgG ₁ Clone # 907812
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Human embryonic kidney cell line HEK293-derived human B7-H7/HHLA2 Met1-Asn344 Accession # Q9UM44
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 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	HEK Human Cell Line Transfected with Human B7-H7/HHLA2 and eGFP

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

B7-H7, also known as HHLA2 (HERV-H LTR-associating 2), is a member of the B7 family of immune regulatory proteins (1, 2). Mature human B7-H7 consists of a 322 amino acid (aa) extracellular domain (ECD) with three immunoglobulin-like domains, a 21 aa transmembrane segment, and a 49 aa cytoplasmic domain (3-5). B7-H7 is constitutively expressed on monocytes and is up-regulated by LPS and IFN-γ stimulation. It is expressed on LPS/IFN-γ treated B cells but not on resting B cells (5). B7-H7 binds to cell surface determinants on resting and mature T cells, B cells, and monocytes as well as on immature and mature dendritic cells (5). Soluble B7-H7 inhibits the proliferation of activated CD4⁺ and CD8⁺ T cells and their production of IFN-γ, TNF-α, IL-5, IL-10, IL-13, IL-17A, and IL-22 (5).

References:

1. Zou, W. and L. Chen (2008) *Nat. Rev. Immunol.* **8**:467.
2. Bour-Jordan, H. *et al.* (2011) *Immunol. Rev.* **241**:180.
3. Mager, D.L. *et al.* (1999) *Genomics* **59**:255.
4. Flajnik, M.M. *et al.* (2012) *Immunogenetics* **64**:571.
5. Zhao, R. *et al.* (2013) *Proc. Natl. Acad. Sci. USA* **110**:9879.

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