

## DESCRIPTION

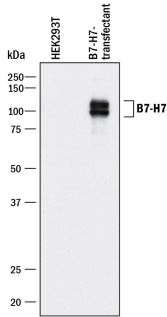
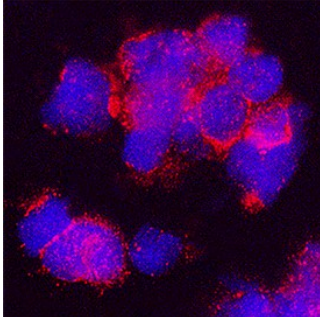
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human B7-H7/HHLA2 in direct ELISAs.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Human embryonic kidney cell line HEK293-derived human B7-H7/HHLA2 Met1-Asn344 Accession # Q9UM44
<b>Formulation</b>	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
<b>Western Blot</b>	1 µg/mL	See Below
<b>Immunocytochemistry</b>	1-15 µg/mL	See Below

## DATA

Western Blot	Immunocytochemistry
 <p><b>Detection of Human B7-H7/HHLA2 by Western Blot.</b> Western blot shows lysates of HEK293T human embryonic kidney cell line transfected with human B7-H7. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human B7-H7/HHLA2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF8084) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). Specific bands were detected for B7-H7/HHLA2 at approximately 90-110 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	 <p><b>B7-H7/HHLA2 in Human Monocytes.</b> B7-H7/HHLA2 was detected in immersion fixed human monocytes using Goat Anti-Human B7-H7/HHLA2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF8084) at 15 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for <a href="#">Fluorescent ICC Staining of Non-adherent Cells</a>.</p>

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## 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<sup>+</sup> and CD8<sup>+</sup> 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.