

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived human B7-H7/HHLA2 protein		
	Human B7-H7/HHLA2 (Ile23-Asn344) Accession # Q9UM44	IEGRMD	Human IgG ₁ (Pro100-Lys330)
	N-terminus		C-terminus
N-terminal Sequence	Ile23		
Analysis			
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	64 kDa (monomer)		

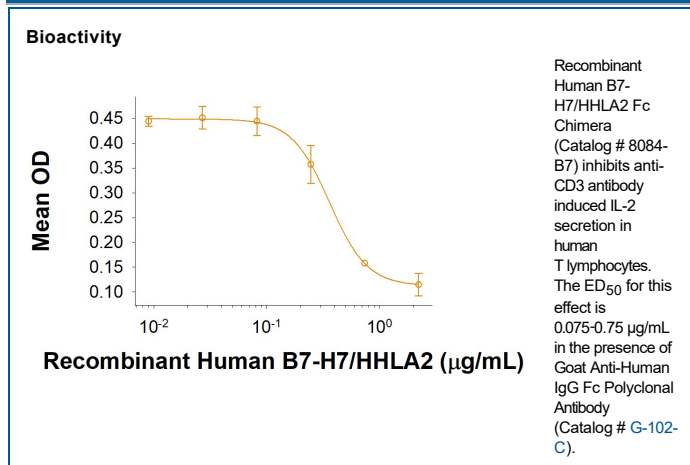
SPECIFICATIONS

SDS-PAGE	90-100 kDa, reducing conditions
Activity	Measured by its ability to inhibit anti-CD3 antibody induced IL-2 secretion in human T lymphocytes. The ED ₅₀ for this effect is 0.075-0.75 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA



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.