

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived human B7-H6 protein		
	Human B7-H6 (Asp25-Ser262) Accession # Q68D85.1	6-His tag	Avi-tag
	N-terminus		C-terminus
N-terminal Sequence Analysis	Asp25		
Structure / Form	Biotinylated via Avi-tag		
Predicted Molecular Mass	29 kDa		

SPECIFICATIONS

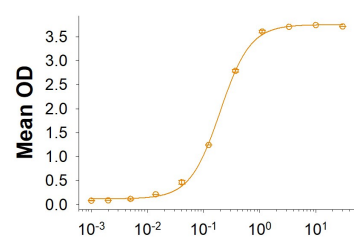
SDS-PAGE	50-58 kDa, under reducing conditions.
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human Nkp30 Fc Chimera (Catalog # 1849-NK) is immobilized at 5 µg/mL (100 µL/well), the concentration of Biotinylated Recombinant Human B7-H6 His-tag Avi-tag (Catalog # AVI9309) that produces 50% of the optimal binding response is 0.10-0.80 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. 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	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <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

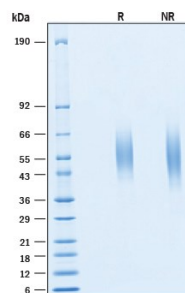
Binding Activity



Biotinylated Recombinant Human B7-H6 His-tag Avi-tag (µg/mL)

Biotinylated Recombinant Human B7-H6 His-tag Avi-tag Protein Binding Activity. When Recombinant Human Nkp30 Fc Chimera (Catalog # 1849-NK) is immobilized at 5 µg/mL (100 µL/well), the concentration of Biotinylated Recombinant Human B7-H6 His-tag Avi-tag (Catalog # AVI9309) that produces 50% of the optimal binding response is 0.10-0.80 µg/mL.

SDS-PAGE



Biotinylated Recombinant Human B7-H6 His-tag Avi-tag Protein SDS-PAGE. 2 µg/lane of Biotinylated Recombinant Human B7-H6 His-tag Avi-tag Protein (Catalog # AVI9309) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 50-58 kDa.

BACKGROUND

B7-H6 is a glycosylated member of the B7 family of immune co-stimulatory proteins (1, 2). Mature human B7-H6 consists of a 238 amino acid (aa) extracellular domain (ECD) that contains one Ig-like V domain and one Ig-like C1 domain, a 21aa transmembrane segment, and a 171aa cytoplasmic domain that contains one ITIM, one SH2, and one SH3 motif (3). Both of the Ig-like domains carry N-linked glycosylation (4). Within the ECD, human B7-H6 shares 99%, 94%, and 87% aa sequence identity with chimpanzee, orangutan, and gibbon B7-H6, respectively, and 53%-56% with bovine, canine, and equine B7-H6. Orthologs in mouse and rat have not been identified. The Ig-like V domain mediates 1:1 stoichiometric binding of B7-H6 to NKP30 expressed on NK cells (4, 5). It does not show binding to NKP44, NKP46, or NKG2D (3, 6). Ligation of NKP30 by B7-H6 induces NK cell activation and target cell cytotoxicity (3). B7-H6 is expressed on a wide range of hematopoietic, carcinoma, and melanoma tumor cells, which is consistent with the detection of NKP30 binding sites on many tumors (3, 7). The expression of NKP30 ligands on tumor cells correlates with tumor cell sensitivity to NKP30-dependent cell lysis (7). Our Avi-tag Biotinylated human B7-H6 features biotinylation at a single site contained within the Avi-tag, a unique 15 amino acid peptide. Protein orientation will be uniform when bound to streptavidin-coated surface due to the precise control of biotinylation and the rest of the protein is unchanged so there is no interference in the protein's bioactivity.

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. Brandt, C.S. *et al.* (2009) J. Exp. Med. **206**:1495.
4. Li, Y. *et al.* (2011) J. Exp. Med. **208**:703.
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6. Arnon, T.I. *et al.* (2006) Semin. Cancer Biol. **16**:348.
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