



### Synonym

B7-H7, HHLA2, B7 Homolog 7

### Source

Human B7-H7, His Tag(B77-H52H6) is expressed from human 293 cells (HEK293). It contains AA Ile 23 - Asn 344 (Accession # [Q9UM44-1](#)).

### Molecular Characterization

B7-H7(Ile 23 - Asn 344)  
Q9UM44-1 Poly-his

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 39.0 kDa. The protein migrates as 50-66 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

### Endotoxin

Less than 1.0 EU per µg by the LAL method.

### Purity

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

### Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

### Reconstitution

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

### Storage

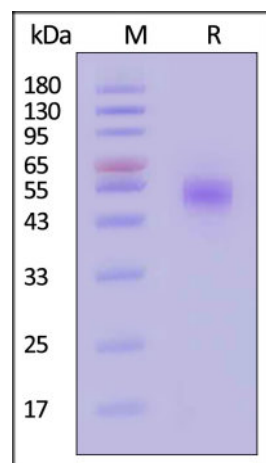
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

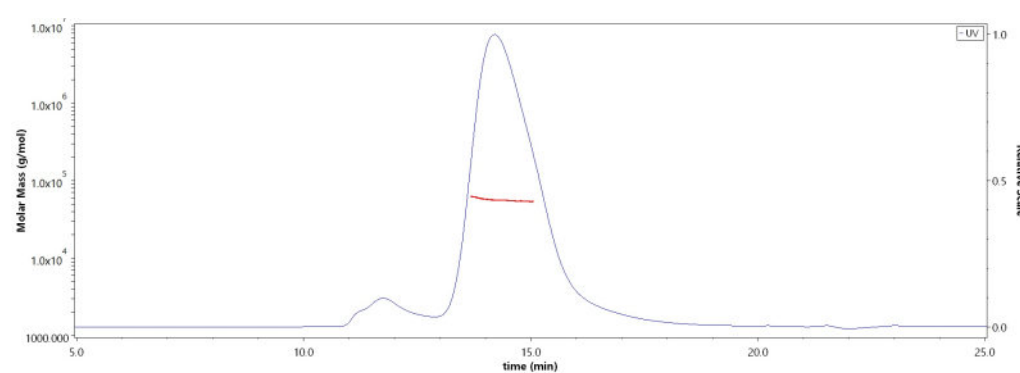
### SDS-PAGE



Human B7-H7, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

### Bioactivity-ELISA

### SEC-MALS

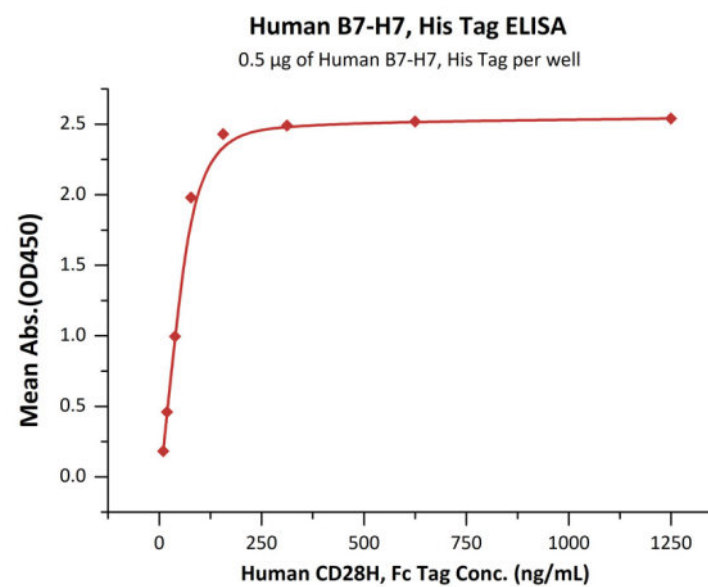
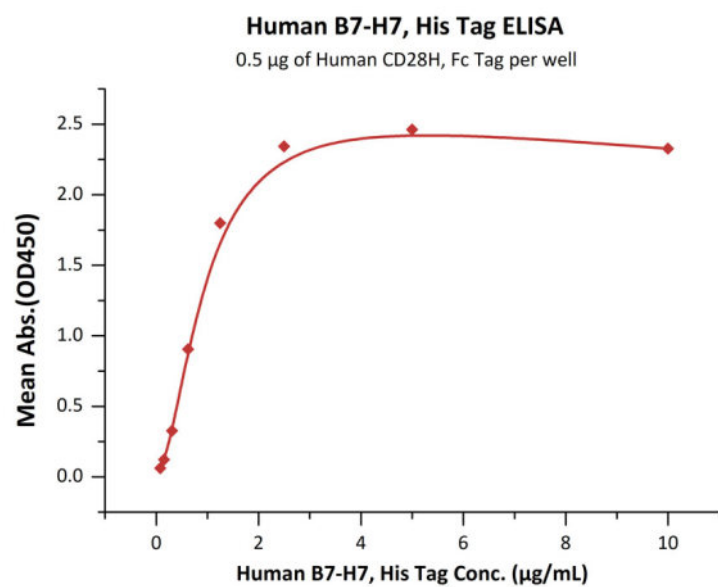


The purity of Human B7-H7, His Tag (Cat. No. B77-H52H6) is more than 90% and the molecular weight of this protein is around 47-65 kDa verified by SEC-MALS.

[Report](#)

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Immobilized Human CD28H, Fc Tag (Cat. No. CDH-H5251) at 5 µg/mL (100 µL/well) can bind Human B7-H7, His Tag (Cat. No. B77-H52H6) with a linear range of 0.078-2.5 µg/mL (QC tested).

**B7-H7 ELISA**

Immobilized Biotinylated Human KIR3DL3 / CD158z Protein, Fc,Avitag (Cat. No. KI3-H82F3) at 2 µg/mL (100 µL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 µg/well) plate can bind Human B7-H7, His Tag (Cat. No. B77-H52H6) with a linear range of 0.02-5 µg/mL (Routinely tested).

Immobilized Human B7-H7, His Tag (Cat. No. B77-H52H6) at 5 µg/mL (100 µL/well) can bind Human CD28H, Fc Tag (Cat. No. CDH-H5251) with a linear range of 10-156 ng/mL (Routinely tested).

**Background**

B7-H7 (HHLA2) is a newly identified B7 family member that regulates human T-cell functions. B7-H7 was previously known as human endogenous retrovirus-H long terminal repeat associating 2 (HHLA2) with unidentified function. Recently, B7-H7 has been identified as a specific ligand for human CD28H. The B7-H7-CD28H pathway strongly promoted CD4+ T-cell proliferation and cytokine production via an AKT-dependent signaling cascade in the presence of TCR signaling, suggesting B7-H7 comprises a new co-stimulatory pathway. The first IgV domain of B7-H7, which presumably binds to a putative receptor, shows the highest homology to other B7 family members.

**Clinical and Translational Updates**

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.

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