

Synonym

B7-H7,HHLA2,B7 Homolog 7

Source

Human B7-H7, His Tag (B77-H52H5) is expressed from human 293 cells (HEK293). It contains AA Ile 23 - Asn 344 (Accession # [Q9UM44-1](#)).
Predicted N-terminus: Ile 23

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 38.9 kDa. The protein migrates as 48-60 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per µg by the LAL method.

Purity

>90% as determined by SDS-PAGE.
>90% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4. Normally trehalose is added as protectant before lyophilization.
Contact us for customized product form or formulation.

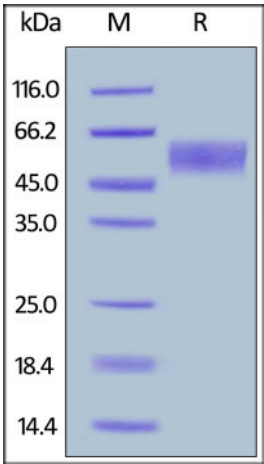
Reconstitution

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.

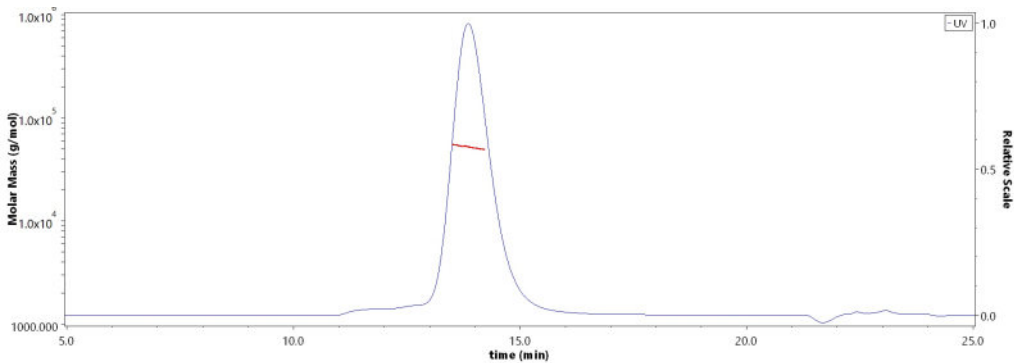
SDS-PAGE



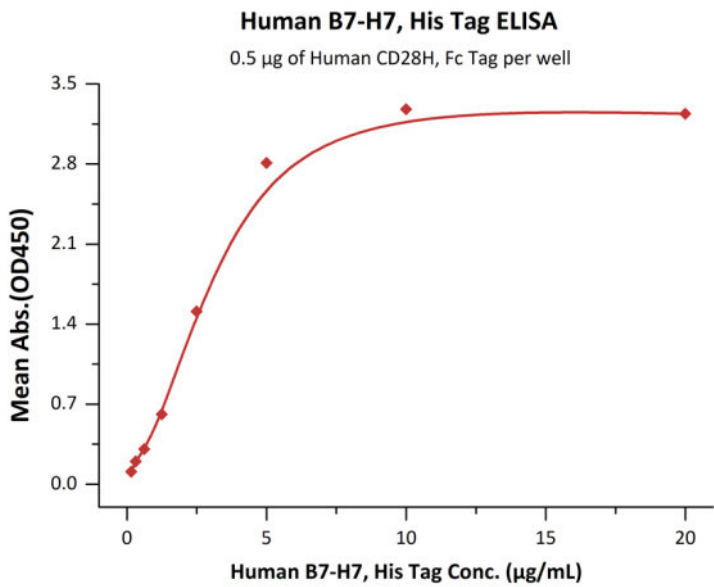
Human B7-H7, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90%.

Bioactivity-ELISA

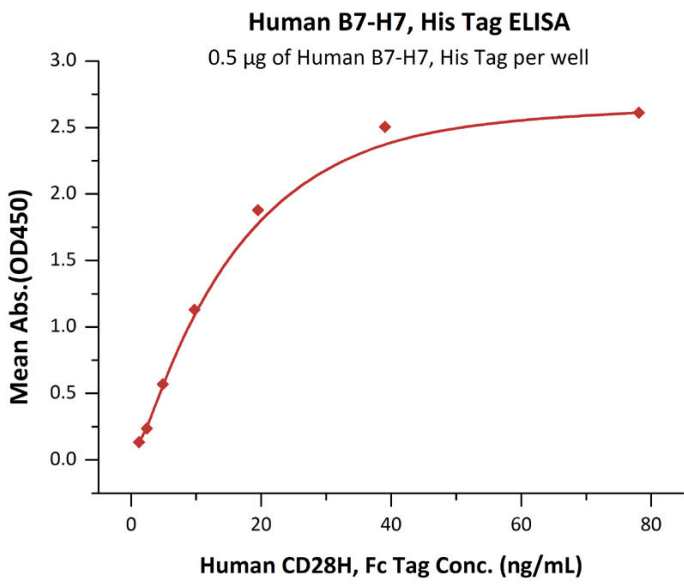
SEC-MALS



The purity of Human B7-H7, His Tag (Cat. No. B77-H52H5) is more than 90% and the molecular weight of this protein is around 45-65 kDa verified by SEC-MALS.
[Report](#)

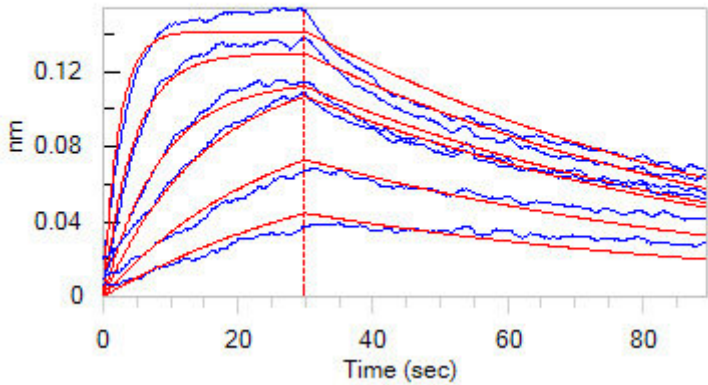


Immobilized Human CD28H, Fc Tag (Cat. No. [CDH-H5251](#)) at 5 µg/mL (100 µL/well) can bind Human B7-H7, His Tag (Cat. No. [B77-H52H5](#)) with a linear range of 0.2-5 µg/mL (QC tested).



Immobilized Human B7-H7, His Tag (Cat. No. [B77-H52H5](#)) at 5 µg/mL (100 µL/well) can bind Human CD28H, Fc Tag (Cat. No. [CDH-H5251](#)) with a linear range of 1-20 ng/mL (Routinely tested).

Bioactivity-BLI



Loaded Human B7-H7, His Tag (Cat. No. [B77-H52H5](#)) on HIS1K Biosensor, can bind Human CD28H, Fc Tag (Cat. No. [CDH-H5251](#)) with an affinity constant of 16.4 nM as determined in BLI assay (ForteBio Octet Red96e) (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 if you have any question on this product.