Data Sheet (Cat.No.TMPY-06177)

TargetMol

HHLA2 Protein, Human, Recombinant (His), Biotinylated

General Information

Synonyms:	B7-H7;B7H7;HHLA2;HERV-H LTR-associating 2
Protein Construction:	A DNA sequence encoding the human HHLA2 (NP_009003.1) (Met1-Asn344) was expressed with a polyhistidine tag at the C-terminus. The purified protein was biotinylated in vitro. Predicted N terminal: Ile 23
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9UM44-1
Molecular Weight:	38.4 kDa (predicted); 55 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

B7H7 gene encodes a protein-ligand found on the surface of monocytes. The encoded protein is thought to regulate cell-mediated immunity by binding to a receptor on T lymphocytes and inhibiting the proliferation of these cells. Alternate splicing results in multiple transcript variants. HERV-H LTR-associating 2 (HHLA2, also called B7H7/B7-H5/B7y)has been recently discovered as the newest member of the B7 family and has 23-33% similarity

in amino acid sequence with the other B7 molecules. This ligand is the only B7 family member that is found in humans but not in mice. It is constitutively expressed on the surface of human monocytes and is induced on B cells. HHLA2 binds to its putative receptor(s) on a variety of immune cells including CD4 and CD8 T cells and antigen-presenting cells. Similar to B7-H3, both a T cell coinhibitory role, as well as a costimulatory role, has been reported for this ligand.Cancer ImmunotherapyImmune CheckpointImmunotherapyTargeted Therapy

Reference

Janakiram M, Chinai JM, Fineberg S, et al.Expression, clinical significance, and receptor identification of the newest B7 family member HHLA2 protein. Clinical cancer research: an official journal of the American Association for Cancer Research. 2015;21(10):2359-2366.

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