Data Sheet (Cat.No.TMPY-06930)

TargetMol

BTLA Protein, Human, Recombinant (hFc)

General Information

Synonyms:	B and T lymphocyte associated;BTLA1;CD272
Protein Construction:	Lys31-Ser150
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q7Z6A9-1
Molecular Weight:	40.5 kDa (predicted); 60-70 kDa (reducing conditions)

QC Testing

Biological Activity:	Immobilized Recombinant Human HVEM / TNFRSF14 Protein (His Tag) at 2 μg/mL (100 μL/well) can bind Recombinant Human BTLA Protein (isoform1, Fc Tag) , the EC50 is 2-6 ng/mL.
Purity:	≥ 95 % as determined by SDS-PAGE. ≥ 95 % as determined by SEC-HPLC.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from 0.22μm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

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.

Shipping:

In general, Lyophilized powders are shipping with blue ice.

Protein Background

BTLA is a inhibitory molecule which belongs to the Ig superfamily. It down-modulates immune responses. As such, reagents that regulate the binding of BTLA to its ligand or alter BTLA signaling have significant therapeutic promise. BTLA is crucial to understand the mechanism(s) of action of these antibodies before attempting clinical applications. BTLA is not expressed by naive T cells, but it is induced during activation and remains expressed on T helper type 1 (T(H)1) but not T(H)2 cells. BTLA is a third inhibitory receptor on T lymphocytes with similarities to

cytotoxic T lymphocyte-associated antigen 4 (CTLA-4) and programmed death 1 (PD-1).Cancer ImmunotherapyCo-inhibitory Immune Checkpoint TargetsImmune CheckpointImmune Checkpoint TargetsImmunotherapyTargeted Therapy

Reference

Fourcade J, et al. (2012) CD8(+) T cells specific for tumor antigens can be rendered dysfunctional by the tumor microenvironment through upregulation of the inhibitory receptors BTLA and PD-Cancer Res. 72(4):887-96.
Kojima R, et al. (2011) Molecular basis for herpesvirus entry mediator recognition by the human immune inhibitory receptor CD160 and its relationship to the cosignaling molecules BTLA and LIGHT. J Mol Biol. 413(4):762-72.
Oki M, et al. (2011) A functional polymorphism in B and T lymphocyte attenuator is associated with susceptibility to rheumatoid arthritis. Clin Dev Immunol. 305656.