Data Sheet (Cat.No.TMPY-06913)

TargetMol

BTLA Protein, Human, Recombinant (His & Avi), Biotinylated

General Information

Synonyms:	BTLA1;B and T lymphocyte associated;CD272
Protein Construction:	Lys31-Ser150
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q7Z6A9-1
Molecular Weight:	16.7 kDa (Predicted); 38-50 kDa (Reducing conditions due to glycosylation)

QC Testing

Biological Activity:	Immobilized Anti-BTLA Antibody, hFc Tag at 0.5μg/ml (100μl/well) on the plate. Dose response curve for Biotinylated Human BTLA, His Tag with the EC50 of 8.0ng/ml determined by ELISA.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by 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.

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

B- and T-lymphocyte attenuator (BTLA; CD272) is a 35 kDa type I transmembrane glycoprotein in the CD28 family of T cell costimulatory molecules. BTLA is a inhibitory receptor on lymphocytes that negatively regulates antigen receptor signaling via PTPN6/SHP-1 and PTPN11/SHP-2. BTLA may interact in cis (on the same cell) or in trans (on other cells) with TNFRSF14.

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.

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