

# Human BTLA Protein (Fc Tag)

Catalog Number: 11895-H02H



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

BTLA1; CD272

### Protein Construction:

A DNA sequence encoding the human BTLA (NP\_001078826.1) (Met1-Thr134) was expressed with the Fc region of human IgG1 at the C-terminus.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** > 90 % as determined by SDS-PAGE

### Bio Activity:

**1.Measured by its binding ability in a functional ELISA. 2.Immobilized human BTLA-Fc (Cat:11895-H02H) at 10µg/mL (100µL/well) can bind biotinylated mouse HVEM-Fch (Cat:10567-M03S), the EC<sub>50</sub> of biotinylated mouse HVEM-Fch is 6-70ng/mL.**

### Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

**Predicted N terminal:** Lys 31

### Molecular Mass:

The recombinant human BTLA comprises 342 amino acids and has a predicted molecular mass 38.8 kDa. As a result of glycosylation, it migrates as an approximately 53.7 kDa band in SDS-PAGE under reducing conditions.

### Formulation:

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Stability & Storage:

Samples are stable for twelve months from date of receipt at -20°C to -80°C.

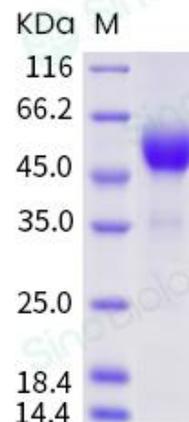
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

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).

## References

- 1.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-1. *Cancer Res.* 72(4):887-96.
- 2.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.
- 3.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.

**For Research Use Only. Not for use in diagnostic or therapeutic procedures.**

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