Recombinant BTLA protein (His tag)

Catalog Number	540611
Synonyms	B- and T-lymphocyte-associated protein; CD antigen CD272
Species	Human
Expression System	E. coli
Accession	Q7Z6A9
Molecular Weight	Predictes a molecular mass of 16.13 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 16 kDa band.

Product Information

Sequence Region	33-157
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 33-157 aa (Q7Z6A9) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human BTLA (B- and T-lymphocyte attenuator) Fragment (33-157) is a high-quality, soluble protein designed for structural and functional studies. This 125-amino acid fragment, representing a stable region of the CD272 antigen, is ideal for investigating immune checkpoint regulation and lymphocyte signaling mechanisms. BTLA (B- and T-lymphocyte-associated protein), also known as CD272, is an inhibitory receptor expressed on lymphocytes that plays a crucial role in negatively regulating antigen receptor signaling through recruitment of phosphatases PTPN6/SHP-1 and PTPN11/SHP-2. This transmembrane protein functions through both cis (same cell) and trans (cell-to-cell) interactions with TNFRSF14, serving dual regulatory roles: maintaining T cell quiescence in naive cells through cis interactions, while providing survival signals to effector T cells during adaptive immune responses through trans interactions. As a cell membrane-anchored, single-pass type I membrane protein, BTLA represents an important immune checkpoint molecule with significant implications for understanding immune regulation and developing therapeutic interventions.