Recombinant TVB77 protein (His tag)

Catalog Number	550809
Species	Human
Expression System	E. coli
Accession	A0A0K0K1E9
Molecular Weight	Predictes a molecular mass of 12.28 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 12 kDa band.

Product Information

Sequence Region	22-115
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, 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 22-115 aa (A0A0K0K1E9) 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 T cell receptor beta variable 7-7 (TRBV7-7) Fragment (residues 22-115) is a high-purity, soluble protein designed for immunological and structural studies. This fragment represents the stable variable domain region essential for antigen recognition, making it an ideal tool for investigating T cell receptor function and adaptive immunity mechanisms. The full-length T cell receptor beta variable 7-7 protein is a crucial component of the T cell receptor (TR) complex, located on the cell membrane. It participates directly in antigen recognition by binding to peptide-major histocompatibility (pMH) complexes displayed by antigen-presenting cells. This interaction initiates T cell activation through intracellular signaling cascades involving TR-CD3 clustering, LCK phosphorylation, and downstream pathways (calcium, MAPK, and NF-κB) that drive T cell growth and differentiation. The protein's role in adaptive immunity is shaped by V-(D)-J rearrangement during thymic development and post-thymic pMH interactions, establishing its significance in self-MH restriction and immune response specificity.