Recombinant TVA19 protein (His tag)

Catalog Number	550282
Synonyms	T-cell receptor alpha chain V region HPB-MLT
Species	Human
Expression System	E. coli
Accession	A0A0A6YYK7
Molecular Weight	Predictes a molecular mass of 12.73 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 13 kDa band.

Product Information

Sequence Region	22-116
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, 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 22-116 aa (A0A0A6YYK7) 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	This product is a high-quality recombinant protein fragment of human T cell receptor alpha variable 19 (T-cell receptor alpha chain V region HPB-MLT), corresponding to amino acids 22-116. This 95-amino acid fragment has been computationally optimized for stability and solubility, making it an ideal reagent for structural studies, biochemical assays, and immunological research focused on T cell receptor function and antigen recognition mechanisms. The full-length T cell receptor alpha chain variable region plays a critical role in adaptive immunity by participating in antigen recognition through alpha-beta T cell receptors. These receptors are essential for immune responses and are present on T lymphocyte cell surfaces, where they recognize peptide-major histocompatibility complexes displayed by antigen presenting cells. This recognition initiates TCR-CD3 clustering and intracellular signaling cascades involving LCK phosphorylation, ZAP70 recruitment, and formation of the LAT signalosome, ultimately activating calcium, MAPK, and NF-kB pathways that drive T cell growth and differentiation. The T cell repertoire is generated through V-(D)-J rearrangement in the thymus and is further refined by intrathymic selection events. The protein is localized to the cell membrane, where it functions in immune recognition and signaling processes fundamental to T cell-mediated immunity.