Recombinant TV381 protein (His tag)

Catalog Number	550289
Species	Human
Expression System	E. coli
Accession	A0A0B4J264
Molecular Weight	Predictes a molecular mass of 12.72 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	>86%, 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 (A0A0B4J264) 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 alpha variable 38-1 (TRAV38-1) fragment (amino acids 22-116), representing a stable and soluble unit of the variable domain essential for antigen recognition in T cell-mediated immunity. This carefully selected fragment is ideal for structural studies, biochemical assays, and immunological research applications. The T cell receptor alpha variable 38-1 protein constitutes the V region of the variable domain of the T cell receptor alpha chain, playing a critical role in antigen recognition. Alpha-beta T cell receptors are antigen-specific receptors essential for adaptive immune responses, present on T lymphocyte cell surfaces where they recognize peptide-major histocompatibility complexes displayed by antigen presenting cells. This recognition initiates TR-CD3 clustering and intracellular signaling cascades involving LCK phosphorylation of ITAM motifs, ZAP70 recruitment, and LAT signalosome formation, ultimately activating calcium, MAPK, and NF-kB pathways that drive T cell growth and differentiation. The protein is localized to the cell membrane and contributes to the generation of a diverse T cell repertoire through V-(D)-J rearrangement in the thymus, with post-thymic interactions shaping structural and functional avidity for optimal immune function.