Recombinant TVAL2 protein (His tag)

Catalog Number	549977
Species	Human
Expression System	E. coli
Accession	A0A075B6T6
Molecular Weight	Predictes a molecular mass of 12.04 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 12 kDa band.

Product Information

Sequence Region	21-113
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 21-113 aa (A0A075B6T6) 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 T cell receptor alpha variable 12-2 (TRAV12-2) fragment (amino acids 21-113) from Homo sapiens. This carefully selected fragment represents a stable, soluble unit of the variable domain that participates in antigen recognition, making it ideal for structural studies, immunological research, and T cell receptor characterization. The T cell receptor alpha variable 12-2 protein is a crucial component of the alpha-beta T cell receptor complex, which plays an essential role in adaptive immunity. This V region of the variable domain participates directly in antigen recognition, specifically binding to peptide-major histocompatibility (pMH) complexes displayed by antigen presenting cells. The interaction between alpha-beta TR and pMH complexes initiates T cell receptor-CD3 clustering on the cell surface, triggering intracellular signaling cascades that lead to T cell activation, growth, and differentiation. This process is fundamental to mounting effective immune responses against pathogens while maintaining self-tolerance. The protein is localized to the cell membrane, where it functions as part of the T cell receptor complex. The T cell repertoire is generated through V-(D)-J rearrangement in the thymus and is further refined through selection processes to create a peripheral T cell pool capable of distinguishing self from non-self antigens.