Recombinant TVA91 protein (His tag)

Catalog Number	549979
Species	Human
Expression System	E. coli
Accession	A0A075B6T8
Molecular Weight	Predictes a molecular mass of 12.03 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 12 kDa band.

Product Information

Sequence Region	21-112
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 21-112 aa (A0A075B6T8) 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 9-1 (TRAV9-1) fragment (amino acids 21-112) from Homo sapiens, designed for structural and biochemical studies. This 92-amino acid fragment represents a stable, soluble unit of the variable domain, enabling research into T cell receptor function and antigen recognition mechanisms. The full-length T cell receptor alpha variable 9-1 protein functions as the V region of the variable domain in T cell receptor alpha chains, playing a critical role in antigen recognition. Alpha-beta T cell receptors are essential for adaptive immune responses, recognizing peptide-major histocompatibility complexes displayed by antigen-presenting cells. This recognition initiates T cell receptor signaling through CD3 clustering and intracellular activation pathways involving LCK phosphorylation, ZAP70 recruitment, and formation of the LAT signalosome, ultimately leading to T cell activation, growth, and differentiation. The protein is located on the cell membrane and undergoes V-(D)-J rearrangement in the thymus to generate a diverse T cell repertoire capable of pathogen recognition while maintaining self-tolerance.