# Recombinant TVB68 protein (His tag)

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| **Catalog Number** | 549989 |
| **Species** | Human |
| **Expression System** | E. coli |
| **Accession** | A0A0A6YYG3 |
| **Molecular Weight** | Predictes a molecular mass of 11.85 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 12 kDa band. |

## Product Information

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| **Sequence Region** | 22-113 |
| **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 22-113 aa (A0A0A6YYG3) were fused with 6His tag. |

## Storage & Handling

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| **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.<br>Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise. |

## Description

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| **Description** | Recombinant T cell receptor beta variable 6-8 (TRBV6-8) fragment (residues 22-113) from Homo sapiens, representing a stable and soluble variable domain unit ideal for structural studies, antigen recognition assays, and T cell receptor signaling research.<br>The full-length T cell receptor beta variable 6-8 protein functions as the V region of the T cell receptor (TR) beta chain, directly participating in antigen recognition. It is a critical component of alpha-beta T cell receptors, which are essential for adaptive immunity by binding peptide-major histocompatibility (pMH) complexes on antigen-presenting cells. This interaction initiates T cell activation through TCR-CD3 clustering, LCK phosphorylation, and downstream signaling via ZAP70 and the LAT signalosome, leading to calcium, MAPK, and NF-kB pathway activation that drives T cell growth and differentiation. The protein is localized to the cell membrane, and its repertoire is shaped by V-(D)-J rearrangement and thymic selection to ensure self-MH restriction and prevent autoimmunity. |