Recombinant TRBC2 protein (His tag)

Catalog Number	548877
Species	Human
Expression System	E. coli
Accession	A0A5B9
Molecular Weight	Predictes a molecular mass of 17.90 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 18 kDa band.

Product Information

Sequence Region	1-144
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 1-144 aa (A0A5B9) 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 beta constant 2 (TRBC2) fragment (amino acids 1-144) is a high-purity protein designed for immunological research. This fragment fully encompasses the Ig-like C1-type functional domain, making it an ideal tool for studying T cell receptor structure, antigen recognition, and immune signaling pathways. The T cell receptor beta constant region (TRBC2) forms part of the alpha-beta T cell receptor complex, which is essential for adaptive immunity. These antigen-specific receptors recognize peptide-major histocompatibility complexes displayed by antigen presenting cells, initiating T cell activation through intracellular signaling cascades. Upon binding to pMH complexes, TR-CD3 clustering occurs, leading to phosphorylation events that activate ZAP70 and subsequent formation of the LAT signalosome. This propagates signaling through calcium, MAPK, and NF-kB pathways, ultimately driving T cell growth and differentiation. The T cell repertoire is generated through V-(D)-J rearrangement in the thymus and further refined through selection processes. TRBC2 is localized to the cell membrane, where it functions as part of the complete T cell receptor complex.