重组人TVB9蛋白

Recombinant TVB9 protein (His tag)

目录号 Catalog Number	550546
种属 Species	Human
表达系统 Expression System	E. coli
蛋白编号 Accession	A0A0B4J1U6
分子量 Molecular Weight	Predictes a molecular mass of 12.09 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 12 kDa band.

产品信息

氨基酸序列 Amino Acid Sequence	MSKIKGVTQT PKHLITATGQ RVTLRCSPRS GDLSVYWYQQ SLDQGLQFLI HYYNGEERAK GNILERFSAQ QFPDLHSELN LSSLELGDSA LYFCASSVLE HHHHHH
性状 Form	冻干粉末 Lyophilized powder
组分 Formulation	Lyophilized from sterile PBS, pH 7.4
纯度 Purity	>85%, by SDS-PAGE with Coomassie Brilliant Blue staining.
内毒素 Endotoxin	Not tested.
活性 Activity	Not tested.
稳定性 Stability	Samples are stable for up to twelve months from date of receipt at -70℃
蛋白构建 Protein Construction	DNA encoding 22-114 aa (A0A0B4J1U6) were fused with C-terminal 6His tag.

保存与运输

复溶 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.
储存 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.
运输 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.

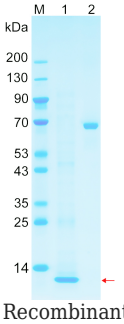
功能描述

研究背景 Background

Recombinant Human T cell receptor beta variable 9 (TRBV9) fragment (residues 22-114) is a high-quality protein designed for immunological and structural studies. This 93-amino acid fragment represents a stable, soluble variable domain region ideal for investigating T cell receptor function, antigen recognition, and adaptive immune mechanisms.
The T cell receptor beta variable 9 (TRBV9) protein is a crucial component of the T cell receptor (TCR) beta chain in humans, specifically constituting the V region of the variable domain that directly participates in antigen recognition. Alpha-beta T cell receptors are antigen-specific receptors essential for adaptive immune responses, present on T lymphocyte surfaces where they recognize peptide-major histocompatibility (pMH) complexes displayed by antigen presenting cells. This recognition initiates TCR-CD3 clustering and intracellular signaling cascades involving LCK phosphorylation of ITAM motifs, ZAP70 recruitment, and formation of the LAT signalosome, ultimately activating calcium, MAPK, and NF-kB pathways that drive T cell growth, differentiation, and immune function. The protein is localized to the cell membrane, and the T cell repertoire undergoes thymic selection to generate self-MH restricted, non-autoaggressive T cells, with post-thymic TCR-pMH interactions further shaping structural and functional avidity.

验证数据

SDS-PAGE



Recombinant TVB9 protein (His tag) SDS-PAGE
M: Marker; Lane 1: TVB9; Lane 2: BSA