Recombinant STAC3 protein (His tag)

Catalog Number	543398
Species	Human
Expression System	E. coli
Accession	Q96MF2
Molecular Weight	Predictes a molecular mass of 15.03 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 16 kDa band.

Product Information

Sequence Region	249-364
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, 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 249-364 aa (Q96MF2) 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 STAC3 Protein Fragment (aa 249-364) - A high-purity protein fragment encompassing the complete SH3 domain of the STAC3 protein, designed for studying excitation-contraction coupling mechanisms in skeletal muscle research. STAC3 (SH3 and cysteine-rich domain-containing protein 3) is a crucial regulator of excitation-contraction coupling in skeletal muscle, essential for normal muscle contraction in response to membrane depolarization. The protein functions by facilitating calcium release from the sarcoplasmic reticulum through its interaction with muscle calcium channels, particularly CACNA1S and CACNA1C. STAC3 enhances CACNA1S channel activity and promotes its expression at the cell membrane while also modulating the inactivation rate of CACNA1C channels. The protein localizes to the cytoplasm and cell membrane, specifically at the sarcolemma and T-tubules, where it co-localizes with calcium channels. This strategic positioning allows STAC3 to play a vital role in the calcium signaling cascade that ultimately leads to muscle contraction.