Recombinant SZT2 protein (His tag)

Catalog Number	545151
Synonyms	Seizure threshold 2 protein homolog
Species	Human
Expression System	E. coli
Accession	Q5T011
Molecular Weight	Predictes a molecular mass of 40.76 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 41 kDa band.

Product Information

Sequence Region	1-352
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 1-352 aa (Q5T011) 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 SZT2 (1-352) is a high-quality protein fragment of the KICSTOR complex component SZT2, specifically engineered for structural and biochemical studies. This 352-amino acid fragment represents a stable, soluble domain ideal for investigating mTORC1 signaling regulation and amino acid sensing pathways. The full-length SZT2 protein functions as a critical component of the KICSTOR complex within the amino acid-sensing branch of the TORC1 signaling pathway. It recruits the GATOR1 complex to lysosomal membranes in an amino acid-independent manner, facilitating interactions with GATOR2 and RAG GTPases. SZT2 acts upstream of RAG GTPases to negatively regulate mTORC1 signaling in the absence of amino acids, with the KICSTOR complex preventing constitutive lysosomal localization and activation of mTORC1. The complex also participates in glucose-mediated mTORC1 regulation. SZT2 localizes primarily to lysosome membranes, with additional presence in peroxisomes, and may contribute to cellular responses against oxidative stress.