Recombinant TMOD1 protein (His tag)

Catalog Number	544531
Synonyms	Erythrocyte tropomodulin; E-Tmod
Species	Human
Expression System	E. coli
Accession	P28289
Molecular Weight	Predictes a molecular mass of 42.23 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 47 kDa band.

Product Information

Sequence Region	1-359
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 1-359 aa (P28289) 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 Tropomodulin-1 (TMOD1) fragment (residues 1-359) is a high-quality protein product designed for structural and biochemical studies. This fragment represents a stable, soluble unit of the full-length protein, ideal for investigating its critical role in regulating actin filament dynamics at the pointed ends. Tropomodulin-1, also known as Erythrocyte tropomodulin (E-Tmod), is encoded by the TMOD1 gene in humans. It functions to block the elongation and depolymerization of actin filaments at their pointed ends, contributing to the formation of short actin protofilaments that define membrane skeleton geometry. The protein plays a key role in regulating actin filament organization by preferentially binding specific tropomyosin isoforms at its N-terminus. Tropomodulin-1 localizes to the cytoplasm and cytoskeleton, specifically at the pointed ends of actin thin filaments in sarcomeric structures, highlighting its importance in cellular architecture and stability.