Recombinant TMC7 protein (His tag)

Catalog Number	549002
Species	Human
Expression System	E. coli
Accession	Q7Z402
Molecular Weight	Predictes a molecular mass of 10.97 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 11 kDa band.

Product Information

Sequence Region	94-168
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 94-168 aa (Q7Z402) 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	This product is a recombinant protein fragment of Transmembrane channel-like protein 7 (TMC7), derived from Homo sapiens. It encompasses amino acids 94-168, a 75-residue segment selected for its stability and solubility, ideal for structural and biochemical studies on TMC7's role in modulating mechanosensitive channels. Transmembrane channel-like protein 7, encoded by the TMC7 gene, functions as an inhibitory modulator of the PIEZO2 mechanosensitive channel in dorsal root ganglion neurons. This modulation occurs through physical interactions or by interfering with PIEZO2's connection to the cytoskeleton, highlighting its importance in sensory mechanotransduction pathways. As a multi-pass membrane protein localized to the membrane, TMC7 is integral to cellular signaling processes, with implications for understanding pain and touch sensation mechanisms.