Recombinant TMC2 protein (His tag)

Catalog Number	543234
Synonyms	Transmembrane cochlear-expressed protein 2
Species	Human
Expression System	E. coli
Accession	Q8TDI7
Molecular Weight	Predictes a molecular mass of 20.45 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 20 kDa band.

Product Information

Sequence Region	530-693
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 530-693 aa (Q8TDI7) 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 TMC2 (Transmembrane channel-like protein 2) Fragment (aa 530-693) is a high-purity, soluble protein designed for structural and biochemical studies. This 164-amino acid fragment, derived from the mechanotransducer channel complex critical for auditory function, offers a stable and expressible unit ideal for investigating sensory transduction mechanisms. Transmembrane channel-like protein 2 (TMC2) is a pore-forming subunit of the mechanotransducer (MET) non-selective cation channel complex, essential for auditory sensory transduction in cochlear hair cells. Located at stereocilia tips, this multi-pass membrane protein forms a channel activated by tension in tip-links, mediating calcium-permeable cation influx that underlies hearing. The full-length protein, expressed in human cell membranes, plays a key role in converting mechanical stimuli into electrical signals in both auditory and vestibular systems, with implications for understanding hereditary hearing loss.