Recombinant TM63A protein (His tag)

Catalog Number	541897
Synonyms	Transmembrane protein 63A; hTMEM63A
Species	Human
Expression System	E. coli
Accession	O94886
Molecular Weight	Predictes a molecular mass of 24.87 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 26 kDa band.

Product Information

Sequence Region	218-416
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, 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 218-416 aa (O94886) 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 high-quality recombinant protein fragment of human Mechanosensitive cation channel TMEM63A (hTMEM63A), spanning residues 218-416. This fragment has been computationally selected for stability and solubility, making it an excellent tool for structural studies, biochemical assays, and functional investigations into this critical mechanosensitive ion channel. The full-length TMEM63A protein is a mechanosensitive cation channel with low conductance and a high activation threshold. It plays a vital role in lysosomal morphology by mediating lysosomal mechanosensitivity and is crucial for respiration, particularly in facilitating the baby's first breath and ongoing lung function. Upon lung inflation, it conducts cation currents in alveolar cells, triggering surfactant secretion into the airspace. TMEM63A also functions as an osmosensitive channel activated by hypotonic stress. Unlike TMEM63B, it does not exhibit phospholipid scramblase activity. The protein localizes to the lysosome membrane, early endosome membrane, and cell membrane, where it functions as a multi-pass transmembrane protein.