Recombinant LETM1 protein (His tag)

Catalog Number	539611
Synonyms	Electroneutral mitochondrial K(+)/H(+)exchanger; KHE; Leucine zipper-EF-hand-containing transmembrane protein 1
Species	Human
Expression System	E. coli
Accession	O95202
Molecular Weight	Predictes a molecular mass of 23.56 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 29 kDa band.

Product Information

Sequence Region	544-739
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 544-739 aa (O95202) 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 LETM1 Fragment (544-739): A high-purity protein fragment encompassing the EF-hand domain of the Mitochondrial Proton/Calcium Exchanger Protein (LETM1). This product is an essential tool for investigating calcium and potassium/proton exchange mechanisms, mitochondrial morphology maintenance, and respiratory chain supercomplex assembly in a domain-specific context. The full-length Leucine zipper-EF-hand-containing transmembrane protein 1 (LETM1) is a crucial mitochondrial inner membrane protein in humans that facilitates proton-dependent calcium efflux and electroneutral proton/potassium exchange. It plays a vital role in maintaining mitochondrial tubular networks, cristae organization, and the structural integrity of respiratory chain supercomplexes. Located in the mitochondrial inner membrane as a single-pass membrane protein, LETM1's functions are supported by key domains, including the EF-hand domain, which is contained within this recombinant fragment (544-739) and is implicated in calcium binding and regulatory functions essential for mitochondrial ion homeostasis and morphology.