Recombinant CLCKB protein (His tag)

Catalog Number	540028
Synonyms	Chloride channel Kb; ClC-K2
Species	Human
Expression System	E. coli
Accession	P51801
Molecular Weight	Predictes a molecular mass of 20.02 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 20 kDa band.

Product Information

Sequence Region	521-687
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, 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 521-687 aa (P51801) 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 Chloride Channel Protein ClC-Kb Fragment (521-687) – a high-purity, functional fragment encompassing the CBS 1 and CBS 2 domains, engineered for targeted studies of chloride channel regulation and ion selectivity mechanisms. The full-length Chloride channel protein ClC-Kb, encoded by the CLCNKB gene, is an anion-selective channel predominantly permeable to chloride and other small monovalent anions. It functions as a homodimeric channel with dual ion conduction pathways, regulated by fast and slow gating mechanisms. When assembled with the BSND/Barttin regulatory subunit, it localizes to the basolateral plasma membrane and exhibits linear current-voltage characteristics. This protein plays a critical role in renal electrolyte and acid-base homeostasis, mediating chloride conductance in nephron segments such as the thick ascending limb of Henle's loop and collecting duct. Additionally, it is essential for hearing, as it conducts chloride currents in the inner ear's stria vascularis to establish the endocochlear potential.