Recombinant CLCN5 protein (His tag)

Catalog Number	537809
Synonyms	+; -; Chloride channel protein 5; ClC-5; Chloride transporter ClC-5
Species	Human
Expression System	E. coli
Accession	P51795
Molecular Weight	Predictes a molecular mass of 23.64 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 24 kDa band.

Product Information

Sequence Region	623-816
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 623-816 aa (P51795) 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 H(+)/Cl(-) Exchange Transporter 5 (ClC-5) Fragment (residues 623-816) – a high-purity protein fragment encompassing the CBS 1 and CBS 2 domains. This product is engineered for targeted investigation of chloride-proton antiport mechanisms and regulatory domain functions, offering researchers a precise tool for structural and functional studies. The full-length H(+)/Cl(-) exchange transporter 5 (ClC-5), encoded by the CLCN5 gene, functions as a proton-coupled chloride transporter that operates as an antiport system, exchanging chloride ions for protons. It plays a critical role in acidifying the endosome lumen and is essential for renal tubular function. Localized to the Golgi apparatus, endosome, and cell membranes as a multi-pass membrane protein, ClC-5 belongs to the CLC channel family, which includes both chloride channels and proton-coupled anion transporters. The absence of conserved gating glutamate residues in certain family members suggests channel-like activity, though ClC-5 primarily facilitates ion exchange. This recombinant fragment, spanning residues 623-816, includes the CBS 1 and CBS 2 domains, enabling focused research on their regulatory roles in transporter function and cellular ion homeostasis.