Recombinant TTYH3 protein (His tag)

Catalog Number	548189
Synonyms	hTTY3; Volume-regulated anion channel subunit TTYH3
Species	Human
Expression System	E. coli
Accession	Q9C0H2
Molecular Weight	Predictes a molecular mass of 15.89 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 16 kDa band.

Product Information

Sequence Region	258-386
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 258-386 aa (Q9C0H2) 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 Protein tweety homolog 3 (hTTY3) fragment (residues 258-386) is a high-quality, soluble protein derived from the human volume-regulated anion channel subunit TTYH3. This fragment is ideally suited for structural studies, biochemical assays, and functional investigations into anion channel regulation, offering researchers a stable and reliable tool for advancing neuroscience and cellular physiology research. Protein tweety homolog 3 (TTYH3) is a multi-pass membrane protein localized to the cell membrane in humans. It functions as a calcium-independent, swelling-dependent volume-regulated anion channel (VRAC-swell), playing a critical role in regulatory volume decrease (RVD) in the brain by mediating the efflux of anions such as chloride and organic osmolytes like glutamate. This process is essential for maintaining cellular homeostasis under osmotic stress. Additionally, TTYH3 has been implicated as a probable large-conductance Ca^{2+}-activated chloride channel, contributing to its significance in neuronal and cellular signaling pathways. The provided fragment (residues 258-386) represents a stable, soluble region selected for experimental applications, enabling focused studies on this key membrane protein's properties.