Recombinant GUC2D protein (His tag)

Catalog Number	544830
Synonyms	RETGC-1; CG-E; Guanylate cyclase 2D, retinal; Rod outer segment membrane guanylate cyclase; ROS-GC
Species	Human
Expression System	E. coli
Accession	Q02846
Molecular Weight	Predictes a molecular mass of 44.78 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 45 kDa band.

Product Information

Sequence Region	52-462
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 52-462 aa (Q02846) 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 Retinal Guanylyl Cyclase 1 (RETGC-1) Fragment (aa 52–462) is a high-quality protein product derived from the human GUCY2D gene. This fragment, encompassing 411 amino acids, is engineered for stability and solubility, making it ideal for structural studies, enzymatic assays, and functional investigations in phototransduction research. Retinal Guanylyl Cyclase 1 (RETGC-1), encoded by the GUCY2D gene, is a key enzyme in phototransduction, catalyzing the synthesis of cyclic GMP (cGMP) in rod and cone photoreceptors. It plays an essential role in replenishing cGMP levels, which is critical for visual signal transduction. The protein is localized to the photoreceptor outer segment membrane and the endoplasmic reticulum, functioning as a single-pass type I membrane protein. Additionally, it may contribute to the trafficking of membrane-associated proteins to photoreceptor outer segments. This recombinant fragment (aa 52–462) represents a stable, soluble unit selected for biochemical and structural analyses, supporting research into retinal function and related disorders.