Recombinant LCA5 protein (His tag)

Catalog Number	540645
Synonyms	Leber congenital amaurosis 5 protein
Species	Human
Expression System	E. coli
Accession	Q86VQ0
Molecular Weight	Predictes a molecular mass of 25.50 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 29 kDa band.

Product Information

Sequence Region	99-297
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 99-297 aa (Q86VQ0) 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 Lebercilin (LCA5) Fragment (aa 99-297) - A highly stable and soluble protein fragment ideal for structural studies and functional analysis of intraflagellar transport mechanisms in photoreceptor cells. Lebercilin, encoded by the LCA5 gene, plays a critical role in intraflagellar protein (IFT) transport within photoreceptor cilia, essential for proper visual function. The protein localizes to multiple cytoskeletal structures including the cilium axoneme, basal body, and centrosome, where it interacts with both IFT complex A and B proteins. In non-ciliated cells, it associates with the centrosome and microtubule network, indicating its fundamental role in cellular transport systems. Mutations in LCA5 are associated with Leber congenital amaurosis, a severe form of inherited retinal dystrophy, highlighting the protein's clinical significance in visual health and disease pathology.