Recombinant MYO7A protein (His tag)

Catalog Number	544921
Species	Human
Expression System	E. coli
Accession	Q13402
Molecular Weight	Predictes a molecular mass of 44.34 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 44 kDa band.

Product Information

Sequence Region	1148-1521
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 1148-1521 aa (Q13402) 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 Unconventional Myosin-VIIa Fragment (residues 1148-1521) is a high-purity protein product designed for structural and biochemical studies. This 374-amino acid fragment offers a stable and soluble unit ideal for investigating the molecular mechanisms of MYO7A, an actin-based motor protein critical for intracellular transport in sensory cells. Unconventional myosin-VIIa (MYO7A) is an actin-based motor molecule with ATPase activity that facilitates intracellular movements by transporting membranous compartments along actin filaments. In the retina, it plays essential roles in photoreceptor disk renewal, melanosome and phagosome distribution in retinal pigment epithelial cells, and regulation of opsin transport. Within the inner ear, MYO7A is crucial for cochlear hair cell bundle differentiation, morphogenesis, and organization, and participates in mechanotransduction networks alongside USH1C, USH1G, and CDH23. The protein localizes to the cytoplasm, cell cortex, cytoskeleton, and synaptic regions, with specific enrichment in photoreceptor inner/outer segments and stereocilia tips in hair cells. This fragment (1148-1521) represents a computationally selected stable region optimized for experimental applications.