Recombinant ARRS protein (His tag)

Catalog Number	537497
Synonyms	48 kDa protein; Retinal S-antigen; S-AG; Rod photoreceptor arrestin
Species	Human
Expression System	E. coli
Accession	P10523
Molecular Weight	Predictes a molecular mass of 46.78 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 49 kDa band.

Product Information

Sequence Region	1-405
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 1-405 aa (P10523) 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 S-arrestin (48 kDa protein) Fragment (1-405) is a high-purity, soluble protein designed for structural and biochemical studies. This fragment encompasses the full-length S-arrestin, retaining its critical function in regulating phototransduction by binding to phosphorylated rhodopsin (RHO) and competing with G-proteins, making it an essential tool for vision research and signal transduction investigations. S-arrestin, also known as Retinal S-antigen or Rod photoreceptor arrestin, is encoded by the SAG gene in humans and plays a pivotal role in terminating RHO signaling in phototransduction. It binds specifically to photoactivated, phosphorylated RHO, displacing G-proteins to prevent prolonged signaling, thereby protecting retinal photoreceptor cells from light-dependent degeneration. Subcellularly, S-arrestin is localized to photoreceptor outer segments, particularly in cell projections and cilia, with enrichment near disk membranes in light-exposed retinas. In dark-adapted conditions, it distributes evenly throughout rod cells, highlighting its dynamic regulation in response to light. The provided fragment (residues 1-405) represents a stable, soluble unit ideal for elucidating arrestin mechanisms in retinal health and disease.