Recombinant IFA2 protein (His tag)

Catalog Number	533091
Synonyms	Cel IF A2; Intermediate filament protein A2; IF-A2
Species	Caenorhabditis elegans
Expression System	E. coli
Accession	O02365
Gene ID	181698
Molecular Weight	Predictes a molecular mass of 43.09 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 52 kDa band.

Product Information

Sequence Region	67-414
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 67-414 aa (O02365) 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 Intermediate Filament Protein ifa-2 (Cel IF A2) Fragment (residues 67-414) from Caenorhabditis elegans. This 348-amino acid fragment represents a stable, soluble unit of the essential cytoplasmic intermediate filament protein, optimized for structural and biochemical studies of mechanical strength mechanisms in cellular architecture. The full-length Intermediate Filament Protein ifa-2 (encoded by gene mua-6) is a cytoplasmic intermediate filament that provides mechanical strength to cells in Caenorhabditis elegans. This essential protein plays a critical role in attachment structures within epidermal cells, specifically forming hypodermal hemidesmosome complexes that mediate force transduction between muscles and the external cuticle. Although expressed during embryogenesis, ifa-2 is not required for embryonic development of muscle-cuticle linkages or for hemidesmosomal protein localization in embryos. The protein localizes to cell junctions, specifically hemidesmosomes, where it colocalizes with myoactin, highlighting its importance in maintaining structural integrity and facilitating mechanical force transmission in cellular systems.