Recombinant DCP2 protein (His tag)

Catalog Number	531997
Synonyms	Nudix hydrolase 5; mRNA-decapping enzyme 2
Species	Caenorhabditis elegans
Expression System	E. coli
Accession	O62255
Gene ID	178321
Molecular Weight	Predictes a molecular mass of 31.41 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 34 kDa band.

Product Information

Sequence Region	147-396
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, 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 147-396 aa (O62255) 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	This product is a high-purity recombinant protein fragment of m7GpppN-mRNA hydrolase dcap-2 (Nudix hydrolase 5) from Caenorhabditis elegans, encompassing amino acids 147-396. It includes the complete Nudix hydrolase domain, making it an ideal tool for studying mRNA decapping mechanisms, enzymatic activity, and domain-specific functions in RNA regulation pathways. The full-length m7GpppN-mRNA hydrolase dcap-2 is a decapping metalloenzyme that catalyzes the cleavage of the 7-methyl guanine cap structure from mRNA molecules, producing 5'-phosphorylated mRNA fragments and 7m-GDP. This enzyme plays a critical role in multiple RNA pathways, including the regulation of monomethylguanosine- and trimethylguanosine-capped RNAs. It is involved in key biological processes such as developmental axon guidance, regrowth of PLM touch receptor neurons, ciliary shape formation in sensory neurons during embryogenesis, and promoting survival under high-temperature stress. Additionally, it localizes to cytoplasmic granules and perinuclear regions, particularly in germ cells and maturing oocytes, where it may contribute to stress responses induced by heat shock, osmotic stress, and anoxia.