Recombinant SIMR1 protein (His tag)

Catalog Number	534071
Synonyms	siRNA-defective and mortal germline protein 1
Species	Caenorhabditis elegans
Expression System	E. coli
Accession	O01477
Gene ID	172273
Molecular Weight	Predictes a molecular mass of 36.76 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 39 kDa band.

Product Information

Sequence Region	1-308
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 1-308 aa (O01477) 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 Protein simr-1 Fragment (1-308) from Caenorhabditis elegans is a high-purity, functional fragment encompassing the Tudor domain, ideal for investigating siRNA biogenesis, RNA interference pathways, and fertility mechanisms in germ cells. This product is tailored for researchers studying piRNA-mediated silencing and mutator complex interactions. Protein simr-1 (siRNA-defective and mortal germline protein 1), encoded by the simr-1 gene in Caenorhabditis elegans, functions downstream of piRNA production to promote endogenous siRNA biogenesis from piRNA-targeted mRNAs via the mediator complex in germ cells. It is essential for spermatogenesis, oogenesis, and maintaining fertility across generations by facilitating mutator-dependent silencing of piRNA-targeted genes. The protein localizes to perinuclear regions in germ cells, specifically in distinct SIMR foci that are adjacent to mutator complexes but independent of Mutator foci, P granules, or Z granules. This perinuclear localization, which is not dependent on mut-16, positions simr-1 strategically for RNA interference processes, highlighting its critical role in epigenetic regulation and germline integrity.