Recombinant GEMI2 protein (His tag)

Catalog Number	544060
Synonyms	Gemin-2; Component of gems 2; Survival of motor neuron protein-interacting protein 1; SMN-interacting protein 1
Species	Human
Expression System	E. coli
Accession	O14893
Molecular Weight	Predictes a molecular mass of 28.80 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 29 kDa band.

Product Information

Sequence Region	41-280
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 41-280 aa (O14893) 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 Gem-associated protein 2 (Gemin-2) Fragment (residues 41-280) is a high-quality, stable protein designed for structural and functional studies. This soluble fragment, derived from the essential SMN complex component, enables detailed investigation of snRNP assembly mechanisms critical for spliceosome function. Gemin-2 (encoded by GEMIN2) is a crucial component of the survival of motor neuron (SMN) complex, which catalyzes the assembly of small nuclear ribonucleoproteins (snRNPs) - the fundamental building blocks of the spliceosome. The SMN complex facilitates snRNP biogenesis by accepting five Sm proteins (SNRPD1, SNRPD2, SNRPE, SNRPF, and SNRPG) from the chaperone CLNS1A and promoting their binding to snRNA containing the snRNP code. Gemin-2 plays a key regulatory role by constraining the conformation of these Sm proteins, ensuring proper assembly progression only when cognate RNA substrates are bound. This quality control mechanism prevents premature snRNP assembly. The protein localizes to both nuclear gems (subnuclear structures adjacent to coiled bodies) and the cytoplasm, reflecting its involvement in the spatial coordination of snRNP maturation. The provided fragment represents a stable, soluble domain optimized for biochemical and structural analyses of these critical functions.