Recombinant GEMI protein (His tag)

Catalog Number	541862
Species	Human
Expression System	E. coli
Accession	O75496
Molecular Weight	Predictes a molecular mass of 11.24 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 14 kDa band.

Product Information

Sequence Region	82-161
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 82-161 aa (O75496) 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 Geminin (GMNN) Fragment (aa 82-161) is a highly stable and soluble protein unit designed for structural and biochemical studies. This fragment enables detailed investigation of Geminin's critical roles in DNA replication control and cell cycle regulation, offering researchers a reliable tool for exploring its molecular mechanisms. Geminin, encoded by the GMNN gene in Homo sapiens, is a key regulator of DNA replication and cell cycle progression. It functions by inhibiting the incorporation of the MCM complex into the pre-replication complex (pre-RC), thereby preventing unscheduled DNA replication. Geminin is degraded during mitosis, allowing replication to proceed in the subsequent cell cycle. Additionally, it suppresses the histone acetyltransferase activity of KAT7/HBO1 in a CDT1-dependent manner, which inhibits histone H4 acetylation and DNA replication licensing. Geminin also modulates the transcriptional activity of specific Hox proteins, linking them to cell proliferation control. The protein is primarily localized in the cytoplasm but can translocate to the nucleus, reflecting its dynamic regulatory functions. The provided fragment (amino acids 82-161) represents a stable, soluble region optimized for experimental applications, supporting research into Geminin's multifaceted roles in cellular processes.