

GMNN Protein, Human

Cat. No.:	HY-P701849
Synonyms:	GMNN; Geminin
Species:	Human
Source:	E. coli
Accession:	O75496 (M1-I209)
Gene ID:	51053
Molecular Weight:	

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 µm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	Please use rapid thawing with running water to thaw the protein.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	GMNN protein functions as a key inhibitor of DNA replication by preventing the incorporation of the MCM complex into the pre-replication complex (pre-RC). It undergoes degradation during the mitotic phase, enabling replication in the subsequent cell cycle. Additionally, GMNN inhibits the histone acetyltransferase activity of KAT7/HBO1 in a CDT1-dependent manner, suppressing histone H4 acetylation and DNA replication licensing. It also plays a role in controlling the transcriptional activity of a subset of Hox proteins, linking them to cell proliferation regulation. GMNN forms homotetramers and interacts with CDT1, existing in both 'permissive' heterotrimers and 'inhibitory' heterohexamers. The protein interacts with IDAS, directing GMNN to the nucleus, and forms a heterodimer with MCIDAS, which has lower affinity for CDT1 compared to the GMNN homodimer. Furthermore, GMNN engages in interactions with a subset of Hox proteins, with varying affinities, and interacts with LRWD1 from G1/S to mitosis.
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Caution: Product has not been fully validated for medical applications. For research use only.

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