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32-3895: GMNN Recombinant Protein

Alternative Name : GMNN,Geminin,DNA Replication Inhibitor,Gem,RP3-369A17.3.

Description

Source : Escherichia Coli. Geminin Human Recombinant fused to N-terminal His-Tag produced in E.Coli is a single, non-glycosylated polypeptide chain containing 245 amino acids and having a molecular mass of 27.7 kDa. Geminin is a 25 kDa nuclear protein, which inhibits DNA replication and is degraded during the mitotic phase of the cell cycle. Geminin controls replication by binding to the licensing factor Cdt1, and is involved in neural differentiation. In addition, Geminin directly interacts with Six3 and Hox homeodomain proteins during embryogenesis and inhibits their functions. Geminin can also promote DNA replication. Geminin has 2 roles in 2 different stages of the cell cycle: Geminin is a negative regulator of DNA replication during the 'S phase' of the cell cycle. Inhibition of Geminin during the 'S phase' (by RNAi) results in an additional round of replication of portions of the genome. During the 'M phase' of the cell cycle (mitosis) Geminin stabilizes the replication factor Cdt1 promoting DNA replication during the next cell cycle. Moreover, inhibition of Geminin during mitosis (by RNAi) causes destabilization of Cdt1 protein and impairment of DNA replication during the next cell cycle. Geminin thus guarantees that only one round of replication occurs during each cell cycle. It was discovered that Geminin is overexpressed in a number of malignancies and cancer cell lines. This maintains the concept that Geminin has also a positive role in DNA replication and cell cycle progression. Geminin accumulates through S, G2 and M phases of the cell cycle but is absent during the G1 phase. During the metaphase/anaphase transition of mitosis Geminin levels decrease.

Product Info

Amount :	20 µg
Purification :	Greater than 95.0% as determined by:(a) Analysis by RP-HPLC.(b) Analysis by SDS-PAGE.
Content :	The protein solution contains 20mM Tris pH 8, 100mM NaCl and 10% glycerol.
Storage condition :	Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).Avoid multiple freeze-thaw cycles.
Amino Acid :	MRGSHHHHHH GMASMTGGQQ MGRDLYDDDD KDRWGSMNPS MKQKQEEIKE NIKNSSVPRR TLKMIQPSAS GSLVGRENEL SAGLSKRKHR NDHLTSTTSS PGVIVPESSE NKNLGGVTQE SFDLMIKENP SSQYWKEVAE KRRKALYEAL KENEKLHKEI EQKDNEIARL KKENKELAEV AEHVQYMAEL IERLNGEPLD NFESLDNQEF DSEEETVEDS LVEDSEIGTC AEGTVSSSTD AKPCI.

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