

GEMIN6 Protein, Human (His, Strep)

Cat. No.:	HY-P701848
Synonyms:	GEMIN6; Gem-associated protein 6; Gemin-6; SIP2
Species:	Human
Source:	E. coli
Accession:	Q8WXD5 (M1-Q167)
Gene ID:	79833
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	<p>GEMIN6, a crucial component of the SMN complex, is integral to the assembly of small nuclear ribonucleoproteins (snRNPs), the essential constituents of the spliceosome that play a central role in pre-mRNA splicing. The majority of spliceosomal snRNPs comprise a common set of Sm proteins, including SNRPB, SNRPD1, SNRPD2, SNRPD3, SNRPE, SNRPF, and SNRPG, forming a heptameric protein ring on the Sm site of the small nuclear RNA to create the core snRNP (Sm core). In the cytosol, CLNS1A chaperone traps the Sm proteins SNRPD1, SNRPD2, SNRPE, SNRPF, and SNRPG in an inactive 6S pICln-Sm complex, regulating core snRNP assembly. The SMN complex, consisting of SMN1, GEMIN2/SIP1, DDX20/GEMIN3, GEMIN4, GEMIN5, GEMIN6, GEMIN7, GEMIN8, and STRAP/UNRIP, accepts the trapped 5Sm proteins from CLNS1A to form an intermediate. Binding of snRNA within 5Sm prompts eviction of the SMN complex, allowing SNRPD3 and SNRPB binding to complete the core snRNP assembly. GEMIN6 is part of both the core SMN complex and the SMN-Sm complex, interacting directly with GEMIN7 and GEMIN8, as well as with SNRPB, SNRPD2, SNRPD3, and SNRPE.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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