

## Product datasheet

# Recombinant Human SMN/Gemin 1 protein ab114802

[1 Image](#)

### Overview

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<b>Product name</b>	Recombinant Human SMN/Gemin 1 protein
<b>Protein length</b>	Full length protein

### Description

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<b>Nature</b>	Recombinant
<b>Source</b>	Wheat germ

### Amino Acid Sequence

<b>Accession</b>	<a href="#">Q16637-3</a>
<b>Species</b>	Human
<b>Sequence</b>	MAMSSGGSGGGVPEQEDSVLFRRGTGQSDSDIWDDTALIKAYDKAVASF KHALKNGDICETSGKPKTTPKRKPAKKNKSQKKNTAASLQQWKVGDKCSA WSEDGCYPATIASIDFKRETCVVVYTYGYNREEQNLSDLLSPICEVAN NIEQNAQENENESQVSTDESENSRSPGNKSDNIKPKSAPWNSFLPPPPPM PGPRLGPGKPLKFNGLPPPPPPPPHLLSCWLPPFPSPGPIIPPPPIC PDSLDDADALGSMLISWYMSGYHTGYMEMLA

<b>Molecular weight</b>	57 kDa including tags
<b>Amino acids</b>	1 to 282

### Specifications

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Our [Abpromise guarantee](#) covers the use of **ab114802** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<b>Applications</b>	Western blot SDS-PAGE ELISA
<b>Form</b>	Liquid
<b>Additional notes</b>	Protein concentration is above or equal to 0.05 µg/ul. Best used within three months from the date of receipt.

### Preparation and Storage

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<b>Stability and Storage</b>	Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles. pH: 8.00 Constituents: 0.3% Glutathione, 0.79% Tris HCl
<b>General Info</b>	
<b>Function</b>	The SMN complex plays an essential role in spliceosomal snRNP assembly in the cytoplasm and is required for pre-mRNA splicing in the nucleus. It may also play a role in the metabolism of snoRNPs.
<b>Tissue specificity</b>	Expressed in a wide variety of tissues. Expressed at high levels in brain, kidney and liver, moderate levels in skeletal and cardiac muscle, and low levels in fibroblasts and lymphocytes. Also seen at high levels in spinal cord. Present in osteoclasts and mononuclear cells (at protein level).
<b>Involvement in disease</b>	<p>Defects in SMN1 are the cause of spinal muscular atrophy autosomal recessive type 1 (SMA1) [MIM:253300]. Spinal muscular atrophy refers to a group of neuromuscular disorders characterized by degeneration of the anterior horn cells of the spinal cord, leading to symmetrical muscle weakness and atrophy. Autosomal recessive forms are classified according to the age of onset, the maximum muscular activity achieved, and survivorship. The severity of the disease is mainly determined by the copy number of SMN2, a copy gene which predominantly produces exon 7-skipped transcripts and only low amount of full-length transcripts that encode for a protein identical to SMN1. Only about 4% of SMA patients bear one SMN1 copy with an intragenic mutation. SMA1 is a severe form, with onset before 6 months of age. SMA1 patients never achieve the ability to sit.</p> <p>Defects in SMN1 are the cause of spinal muscular atrophy autosomal recessive type 2 (SMA2) [MIM:253550]. SMA2 is an autosomal recessive spinal muscular atrophy of intermediate severity, with onset between 6 and 18 months. Patients do not reach the motor milestone of standing, and survive into adulthood.</p> <p>Defects in SMN1 are the cause of spinal muscular atrophy autosomal recessive type 3 (SMA3) [MIM:253400]. SMA3 is an autosomal recessive spinal muscular atrophy with onset after 18 months. SMA3 patients develop ability to stand and walk and survive into adulthood.</p> <p>Defects in SMN1 are the cause of spinal muscular atrophy autosomal recessive type 4 (SMA4) [MIM:271150]. SMA4 is an autosomal recessive spinal muscular atrophy characterized by symmetric proximal muscle weakness with onset in adulthood and slow disease progression. SMA4 patients can stand and walk.</p>
<b>Sequence similarities</b>	Belongs to the SMN family. Contains 1 Tudor domain.
<b>Cellular localization</b>	Cytoplasm. Nucleus > gem. Localized in subnuclear structures next to coiled bodies, called Gemini of Cajal bodies.

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## Images

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ab114802 on 12.5% SDS-PAGE Stained with Coomassie Blue.

**Please note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

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