abcam

Product datasheet

Anti-SMN/Gemin 1 antibody ab223068

3 References 3 Images

Overview

Product name	Anti-SMN/Gemin 1 antibody
Description	Rabbit polyclonal to SMN/Gemin 1
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P, ICC/IF
Species reactivity	**Reacts with:** Human **Predicted to work with:** Macaque monkey
Immunogen	Recombinant fragment corresponding to Human SMN/Gemin 1 aa 1-200. Database link: **Q16637** Run BLAST with Run BLAST with
Positive control	WB: A549 and HeLa whole cell lysate. IHC: Human testis tissue. ICC/IF: HepG2 cells.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.03% Proclin 300 Constituents: 50% Glycerol (glycerin, glycerine), PBS
Purity	Protein G purified
Purification notes	Purity >95%
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab223068 in the following tested applications.

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

Application	Abreviews	Notes
WB		1/500 - 1/5000.
IHC-P		1/20 - 1/200.
ICC/IF		1/50 - 1/200.

Target

Function 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.

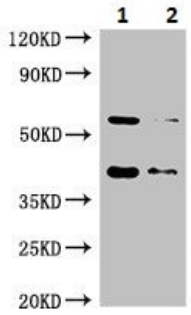
Tissue specificity Expressed in a wide variety of tissues. Expressed at high levels in brain, kidney and liver, moderate levels in skeletal and cardiac muscle, and low levels in fibroblasts and lymphocytes. Also seen at high levels in spinal cord. Present in osteoclasts and mononuclear cells (at protein level).

Involvement in disease 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.
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.
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.
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.

Sequence similarities Belongs to the SMN family.
Contains 1 Tudor domain.

Cellular localization Cytoplasm. Nucleus > gem. Localized in subnuclear structures next to coiled bodies, called Gemini of Cajal bodies.

Images



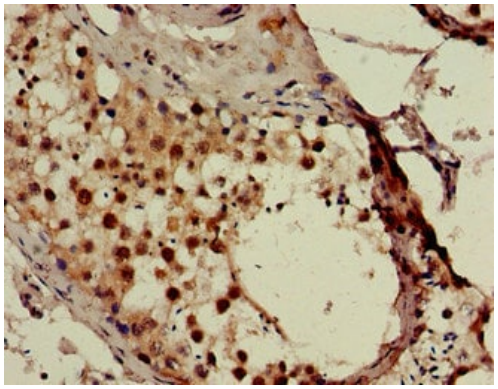
Western blot - Anti-SMN/Gemin 1 antibody (ab223068)

All lanes : Anti-SMN/Gemin 1 antibody (ab223068) at 1/500 dilution

Lane 1 : A549 (human lung carcinoma cell line) whole cell lysate
Lane 2 : HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate

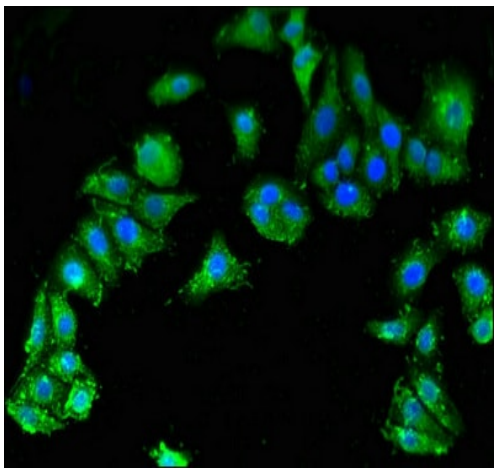
Secondary
All lanes : Goat polyclonal to rabbit IgG at 1/50000 dilution

Developed using the ECL technique.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SMN/Gemin 1 antibody (ab223068)

Paraffin-embedded human testis tissue stained for SMN/Gemin 1 using ab223068 at 1/100 dilution in immunohistochemical analysis.



Immunocytochemistry/ Immunofluorescence - Anti-SMN/Gemin 1 antibody (ab223068)

PFA-fixed, Triton X-100 permeabilized HepG2 (human liver hepatocellular carcinoma cell line) cells stained for SMN/Gemin 1(green) using ab223068 at 1/100 dilution in ICC/IF. Secondary: Alexa Fluor 488® conjugated Goat Anti-Rabbit IgG (H+L).

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