

#12976 Store at -20°C

**SMN1 (2F1) Mouse mAb****Cell Signaling**  
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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, IF-IC	H Mk	Endogenous	35	Mouse IgG1	#Q16637	6606

**Product Usage Information****Application**

Western Blotting  
Immunoprecipitation  
Immunofluorescence (Immunocytochemistry)

**Dilution**

1:1000  
1:50  
1:400

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

**Specificity / Sensitivity**

SMN1 (2F1) Mouse mAb recognizes endogenous levels of total SMN1 protein.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with recombinant protein specific to the carboxy terminus of human SMN1 protein.

**Background**

Survival of Motor Neuron 1 (SMN1) is essential for the maturation of small nuclear ribonucleoproteins (snRNPs) (1,2). SMN1 plays a role in the assembly of spliceosomal snRNPs in the cytoplasm, together with the Gemin proteins, and may also participate in the transport of snRNPs into the nucleus (3-6). SMN1 also participates in the maturation and turnover of snRNPs in nuclear foci Gemini bodies (gems) (7). In addition to the maturation of spliceosomal snRNPs, SMN1 has also been proposed to directly regulate pre-mRNA splicing (8). Researchers have found mutations and deletions of the SMN1 gene are found in 95% of Spinal Muscular Atrophy (SMA) neuromuscular disorder cases (1,9).

**Background References**

1. Nlend Nlend, R. et al. *RNA Biol* 7, 430-40.
2. Pellizzoni, L. et al. (2002) *Science* 298, 1775-9.
3. Liu, Q. et al. (1997) *Cell* 90, 1013-21.
4. Meister, G. et al. (2001) *Nat Cell Biol* 3, 945-9.
5. Narayanan, U. et al. (2002) *Hum Mol Genet* 11, 1785-95.
6. Huber, J. et al. (1998) *EMBO J* 17, 4114-26.
7. Hebert, M.D. et al. (2001) *Genes Dev* 15, 2720-9.
8. Pellizzoni, L. et al. (1998) *Cell* 95, 615-24.
9. Wirth, B. (2000) *Hum Mutat* 15, 228-37.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**WB:** Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)

**Cross-Reactivity Key**

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster  
**X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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