

SMN1 Monoclonal Antibody (2F1)

Catalog Number MA5-15857

Product data sheet

Details		Species Reactivity	
Size	100 µL	Species reactivity	Human, Non-human primate
Host/Isotope	Mouse / IgG1	Tested Applications	
Class	Monoclonal	ELISA (ELISA)	Dilution * 1:10,000
Type	Antibody	Flow Cytometry (Flow)	1:200-1:400
Clone	2F1	Immunohistochemistry (Paraffin) (IHC (P))	1:200-1:1,000
Immunogen	Purified recombinant fragment of human SMN1 expressed in E. Coli.	Western Blot (WB)	1:500-1:2,000
Conjugate	Unconjugated	* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.	
Form	Liquid		
Concentration	Conc. Not Determined		
Storage buffer	ascites		
Contains	0.03% sodium azide		
Storage Conditions	Store at 4°C short term. For long term storage, store at -20°C, avoiding freeze/thaw cycles.		

Product specific information

MA5-15857 targets SMN1 in indirect ELISA, FACS, IHC, and WB applications and shows reactivity with Human and Non-human primate samples. The MA5-15857 immunogen is purified recombinant fragment of human SMN1 expressed in E. Coli. . MA5-15857 detects SMN1 which has a predicted molecular weight of approximately 39kDa.

Background/Target Information

The SMN1 gene is part of a 500 kb inverted duplication on chromosome 5q13. This duplicated region contains at least four genes and repetitive elements which make it prone to rearrangements and deletions. The repetitiveness and complexity of the sequence have also caused difficulty in determining the organization of this genomic region. The telomeric and centromeric copies of this gene are nearly identical and encode the same protein - survival motor neuron protein. The SMN complex plays a catalyst role in the assemble of small nuclear ribonucleoproteins, the building blocks of the spliceosome. Mutations in the SMN1 gene are known to cause spinal muscular atrophy 1/2.

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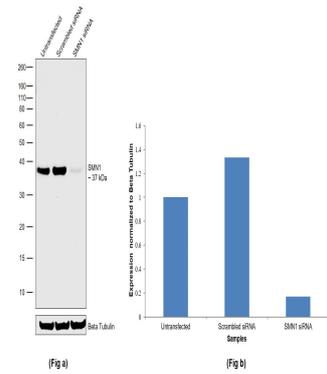
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Product Images For SMN1 Monoclonal Antibody (2F1)

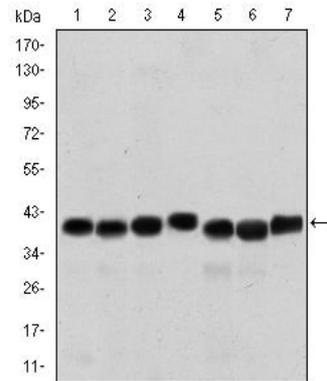
SMN1 Antibody (MA5-15857)

Antibody specificity was demonstrated by siRNA mediated knockdown of target protein. SH-SY5Y cells were transfected with SMN1 siRNA and decrease in signal intensity was observed in western blot application using Anti-SMN1 Monoclonal Antibody (Product # MA5-15857). {KD}



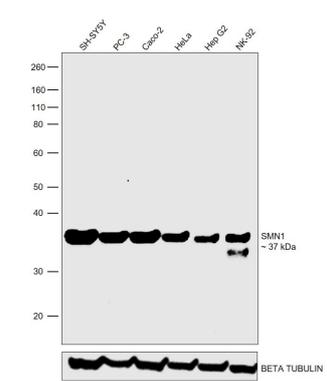
SMN1 Antibody (MA5-15857) in WB

Western blot analysis of SMN1 using SMN1 monoclonal antibody (Product # MA5-15857) in HepG2 (1), HeLa (2), K562 (3), Jurkat (4), SKBR-3 (5), A431 (6) and COS-7 (7) cell lysate.



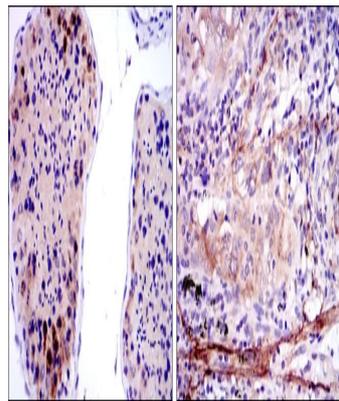
SMN1 Antibody (MA5-15857) in WB

Western blot was performed using Anti-SMN1 Monoclonal Antibody (Product # MA5-15857) and a 37 kDa band corresponding to SMN1 was observed across all the cell lines tested. Whole cell extracts (30 µg lysate) of SH-SY5Y (Lane 1), PC-3 (Lane 2), Caco-2 (Lane 3), HeLa (Lane 4), Hep G2 (Lane 5) and NK-92 (Lane 6) were electrophoresed using NuPAGE™ 10% Bis-Tris Protein Gel (Product # NP0302BOX). Resolved proteins were then transferred onto a nitrocellulose membrane (Product # IB23001) by iBlot® 2 Dry Blotting System (Product # IB21001). The blot was probed with the primary antibody (1:1000 dilution) and detected by chemiluminescence with Goat anti-Mouse IgG (H+L) Superclonal™ Recombinant Secondary Antibody, HRP (Product # A28177, 1:4000 dilution) using the iBright FL 1000 (Product # A32752). Chemiluminescent detection was performed using Novex® ECL Chemiluminescent Substrate Reagent Kit (Product # WP20005).



SMN1 Antibody (MA5-15857) in IHC (P)

Immunohistochemical analysis of paraffin-embedded testis tissues (left) and lung cancer tissues (right) using SMN1 monoclonal antibody (Product # MA5-15857) followed with DAB staining.



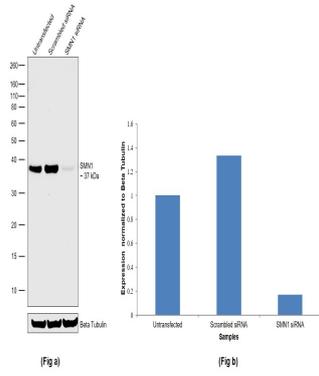
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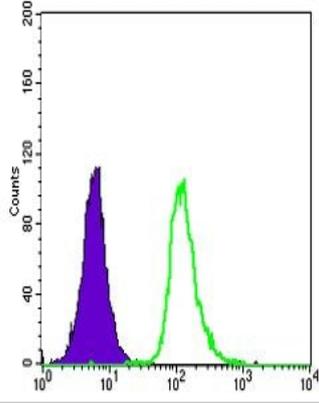
SMN1 Antibody (MA5-15857) in WB

Knockdown of SMN1 was achieved by transfecting SH-SY5Y with SMN1 specific siRNAs (Silencer® select Product # s531465, s530579). Western blot analysis (Fig. a) was performed using whole cell extracts from the SMN1 knockdown cells (lane 3), non-specific scrambled siRNA transfected cells (lane 2) and untransfected cells (lane 1). The blot was probed with SMN1 Monoclonal Antibody (Product # MA5-15857, 1:2000 dilution) and Goat anti-Mouse IgG (H+L) Superclonal™ Recombinant Secondary Antibody, HRP (Product # A28177, 0.25µg/ml, 1:4000 dilution). Densitometric analysis of this western blot is shown in histogram (Fig. b). Decrease in signal upon siRNA mediated knock down confirms that antibody is specific to SMN1.



SMN1 Antibody (MA5-15857) in Flow

Flow cytometric analysis of HepG2 cells using SMN1 monoclonal antibody (Product # MA5-15857) (green) and negative control (purple).



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