

SMN1 Polyclonal Antibody

Catalog NumberPA5-27309

Product data sheet

Details		Species Reactivity	
Size	100 µL	Species reactivity	Human
Host/Isotope	Rabbit / IgG	Tested Applications	
Class	Polyclonal	Western Blot (WB)	1:500-1:3,000
Type	Antibody	Immunocytochemistry (ICC/IF)	1:100-1:1,000
Immunogen	Recombinant protein fragment corresponding to a region within amino acids 1 and 178 of Human SMN1	* 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.	
Conjugate	Unconjugated		
Form	Liquid		
Concentration	1 mg/mL		
Purification	Antigen affinity chromatography		
Storage buffer	PBS, pH 7, with 40% glycerol		
Contains	0.01% thimerosal		
Storage Conditions	Store at 4°C short term. For long term storage, store at -20°C, avoiding freeze/thaw cycles.		

Product specific information

Recommended positive controls: 293T, A431, HeLa, HepG2. Predicted reactivity: Mouse (86%), Rat (84%), Pig (87%), Rhesus Monkey (96%). Store product as a concentrated solution. Centrifuge briefly prior to opening the vial.

Background/Target Information

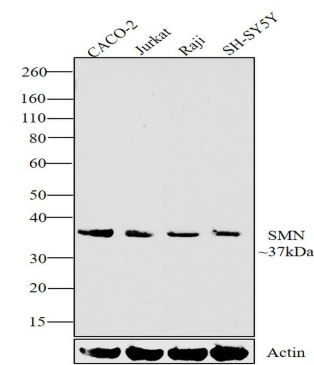
The SMN1 gene is part of a 500 kb inverted duplication on chromosome 5q13. This duplicated region contains at least four genes and repetitive elements which make it prone to rearrangements and deletions. The repetitiveness and complexity of the sequence have also caused difficulty in determining the 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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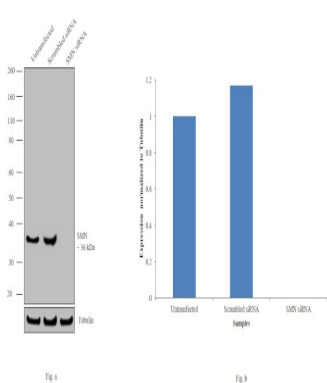
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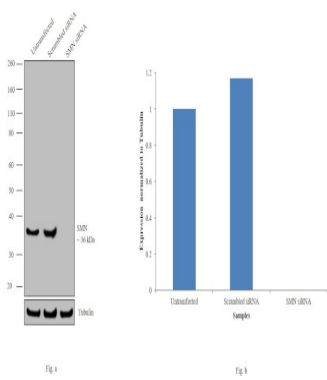
SMN1 Antibody (PA5-27309) in WB

Western blot analysis was performed on modified whole cell extracts (1% SDS) of CACO-2 (Lane 1), Jurkat (Lane 2), Raji (Lane 3) and SH-SY5Y (Lane 4). The blot was probed with SMN Polyclonal Antibody (Product # PA5-27309, 1:1000 dilution) and detected by chemiluminescence using Goat anti-Rabbit IgG (Heavy Chain) Superclonal™ Secondary Antibody, HRP conjugate (Product # A27036, 0.25 µg/mL, 1:4000 dilution). A 37 kDa band corresponding to SMN was observed across the panel tested.



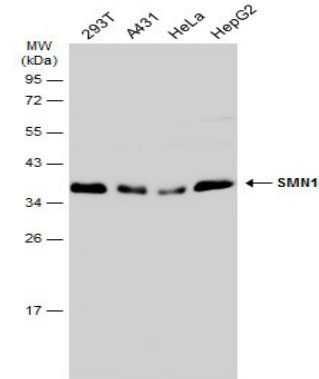
SMN1 Antibody (PA5-27309)

Antibody specificity was demonstrated by siRNA mediated knockdown of target protein. SH-SY5Y cells were transfected with SMN siRNA and reduction of signal was observed in Western Blot using SMN Polyclonal Antibody (Product # PA5-27309). {KD}



SMN1 Antibody (PA5-27309) in WB

Knockdown of SMN was achieved by transfecting SH-SY5Y with SMN specific siRNAs (Silencer® select Product # s530579; s531465). Western blot analysis (Fig. a) was performed using whole cell extracts from the SMN knockdown cells (lane 3), non-specific scrambled siRNA transfected cells (lane 2) and untransfected cells (lane 1). The blots were probed with SMN Polyclonal Antibody (Product # PA5-27309, 1:1000 dilution) and Goat anti-Rabbit IgG (Heavy Chain) Superclonal™ Secondary Antibody, HRP conjugate (Product # A27036, 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 SMN.



SMN1 Antibody (PA5-27309) in WB

Western Blot analysis of SMN1 was performed by separating 30 µg of various whole cell extracts by 12% SDS-PAGE. Proteins were transferred to a membrane and probed with a SMN1 Polyclonal Antibody (Product # PA5-27309) at a dilution of 1:1000 and a HRP-conjugated anti-rabbit IgG secondary antibody.

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