Product datasheet

# Anti-SMN1/2 Antibody (Clone#2B10)

**Catalog Number: *M03420-1***

BOSTER
antibody and ELISA experts
**BOSTER BIOLOGICAL TECHNOLOGY**
Building C21, 3rd to 5th Floors, Optics Valley Biopharmaceutical Accelerator,
East Lake High-Tech Development Zone, Wuhan.
***Web:*** www.boster.com ***Phone:*** 027-67845390/1/2 ***Email:*** boster@boster.com

## Basic Information

| | |
|---|---|
| **Product Name** | Anti-SMN1/2 Antibody (Clone#2B10) |
| **Gene Name** | SMN1/SMN2 |
| **Source** | Mouse |
| **Clonality** | Monoclonal |
| **Isotype** | IgG1 |
| **Species Reactivity** | human, mouse, rat |
| **Tested Application** | WB, IHC, ICC/IF |
| **Contents** | 500 ug/ml antibody with PBS, 0.02% NaN3, 1 mg/ml BSA and 50% glycerol. |
| **Immunogen** | A synthetic peptide corresponding to a sequence at the N-terminus of human SMN1/2, identical to the related mouse and rat sequences. |
| **Concentration** | 200ug/ml |
| **Purification** | protein G purified. |
| **Observed MW** | 39 kDa |
| **Dilution Ratios** | Western blot (WB): 1:500-2000<br>Immunohistochemistry (IHC): 1:50-400<br>Immunocytochemistry/Immunofluorescence (ICC/IF): 1:50-400<br>(Boiling the paraffin sections in 10mM citrate buffer,pH6.0,or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user. |

## Storage

12 months from date of receipt，-20℃ as supplied.

## Background Information

This 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. However, mutations in this gene, the telomeric copy, are associated with spinal muscular atrophy; mutations in the centromeric copy do not lead to disease. The centromeric copy may be a modifier of disease caused by mutation in the telomeric copy. The critical sequence difference between the two genes is a single nucleotide in exon 7, which is thought to be an exon splice enhancer. Note that the nine exons of both the telomeric and centromeric copies are designated historically as exon 1, 2a, 2b, and 3-8. It is thought that gene conversion events may involve the two genes, leading to varying copy numbers of each gene. The protein encoded by this gene localizes to both the cytoplasm and the

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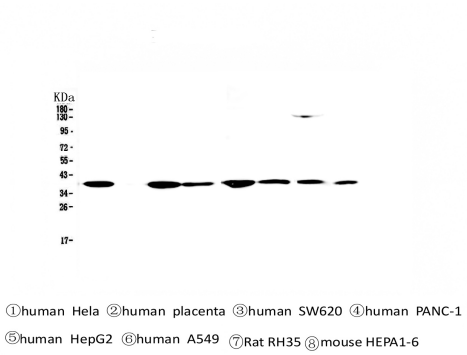
nucleus. Within the nucleus, the protein localizes to subnuclear bodies called gems which are found near coiled bodies containing high concentrations of small ribonucleoproteins (snRNPs). This protein forms heteromeric complexes with proteins such as SIP1 and GEMIN4, and also interacts with several proteins known to be involved in the biogenesis of snRNPs, such as hnRNP U protein and the small nucleolar RNA binding protein. Multiple transcript variants encoding distinct isoforms have been described.

## Reference

Anti-SMN1/2 Antibody (Clone#2B10)被引用在1文献中。

## Selected Validation Data




①human Hela ②human placenta ③human SW620 ④human PANC-1
⑤human HepG2 ⑥human A549 ⑦Rat RH35 ⑧mouse HEPA1-6

Western blot analysis of SMN1/2 using anti-SMN1/2 antibody (M03420-1). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human Hela whole cell lysates,
Lane 2: human placenta tissue lysates,
Lane 3: human SW620 whole cell lysates,
Lane 4: human PANC-1 whole cell lysates,
Lane 5: human HepG2 whole cell lysates,
Lane 6: human A549 whole cell lysates,
Lane 7: rat RH35 whole cell lysates,
Lane 8: mouse HEPA1-6 whole cell lysates.
After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with mouse anti-SMN1/2 antigen affinity purified monoclonal antibody (M03420-1) at a dilution of 1:1000 and probed with a goat anti-mouse IgG-HRP secondary antibody (Catalog # BA1050). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for SMN1/2 at approximately 39 kDa. The expected band size for SMN1/2 is at 32 kDa.

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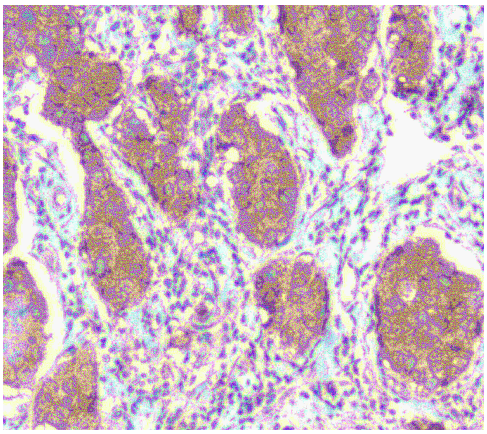
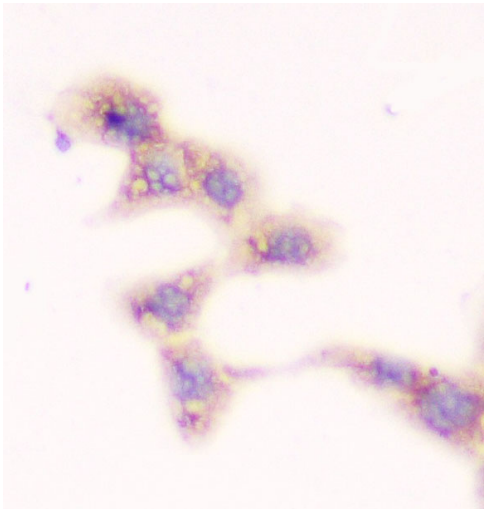


IHC analysis of SMN1/2 using anti-SMN1/2 antibody (M03420-1). SMN1/2 was detected in a paraffin-embedded section of human mammary cancer tissue. Biotinylated goat anti-mouse IgG was used as secondary antibody. The tissue section was incubated with mouse anti-SMN1/2 Antibody (M03420-1) at a dilution of 1:200 and developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB (Catalog # AR1027) as the chromogen.



ICC analysis of SMN1/2 using anti- SMN1/2 antibody (M03420-1). SMN1/2 was detected in an immunocytochemical section of A431 cells. The section was incubated with mouse anti-SMN1/2 Antibody (M03420-1) at a dilution of 1:100. Biotinylated goat anti-mouse IgG was used as secondary antibody. The section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1021) with DAB (Catalog # AR1027) as the chromogen.