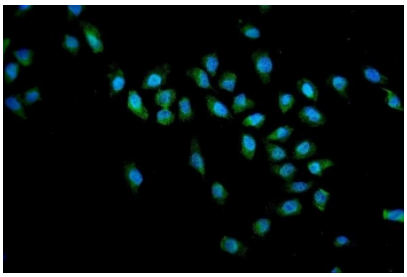
SMN1/2 Antibody (R32249)

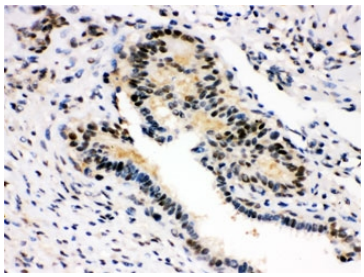
Catalog No.	Formulation	Size
R32249	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

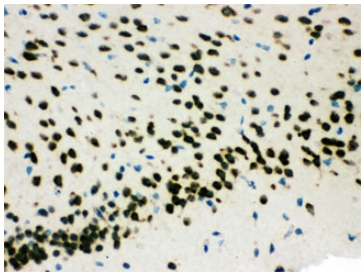
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide
UniProt	Q16637
Localization	Nuclear, cytoplasmic
Applications	Western Blot : 0.1-0.5ug/ml Immunohistochemistry (FFPE) : 0.5-1ug/ml Immunofluorescence (FFPE) : 2-4ug/ml Flow Cytometry : 1-3ug/million cells
Limitations	This SMN1/2 antibody is available for research use only.



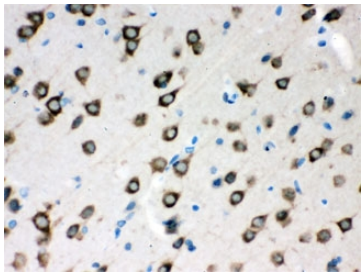
Immunofluorescent staining of FFPE human U-2 OS cells with SMN1/2 antibody (green) and DAPI nuclear stain (blue). HIER: steam section in pH6 citrate buffer for 20 min.



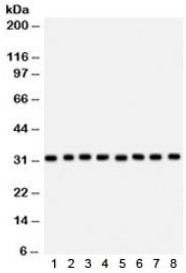
IHC testing of FFPE human breast cancer with SMN1/2 antibody. HIER: Boil the paraffin sections in pH 6, 10mM citrate buffer for 20 minutes and allow to cool prior to staining.



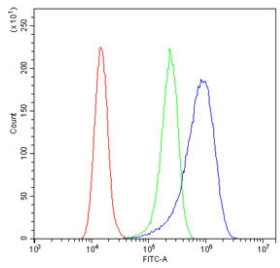
IHC testing of FFPE mouse brain with SMN1/2 antibody. HIER: Boil the paraffin sections in pH 6, 10mM citrate buffer for 20 minutes and allow to cool prior to staining.



IHC testing of FFPE rat brain with SMN1/2 antibody. HIER: Boil the paraffin sections in pH 6, 10mM citrate buffer for 20 minutes and allow to cool prior to staining.



Western blot testing of 1) rat brain, 2) mouse brain, 3) rat liver, 4) mouse liver, human 5) 293, 6) SMCC, 7) HepG2 and 8) HeLa lysate with SMN1/2 antibody. Expected molecular weight: 32-38 kDa.



Flow cytometry testing of human A431 cells with SMN1/2 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= SMN1/2 antibody.

Description

The Survival of Motor Neuron 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 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.

Application Notes

Optimal dilution of the SMN1/2 antibody should be determined by the researcher.

Immunogen

Amino acids RRGTGQSDDSDIWDDTALIKAYDKAVASFKH of human SMN1/2 were used as the immunogen for the SMN1/2 antibody.

Storage

After reconstitution, the SMN1/2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.