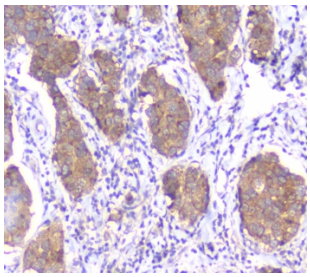
SMN1/2 Antibody [clone 3D10] (RQ4524)

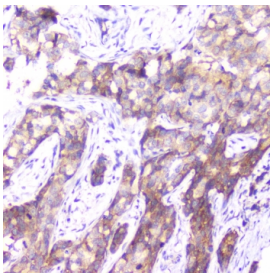
Catalog No.	Formulation	Size
RQ4524	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1
Clone Name	3D10
Purity	Protein G affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
UniProt	Q16637
Localization	Nuclear, cytoplasmic
Applications	Western Blot : 0.5-1ug/ml IHC (FFPE) : 0.5-1ug/ml ICC : 0.5-1ug/ml
Limitations	This SMN1/2 antibody is available for research use only.



IHC testing of FFPE human breast cancer with SMN1/2 antibody. HIER: boil tissue sections in pH6, 10mM citrate buffer, for 10-20 min followed by cooling at RT for 20 min.



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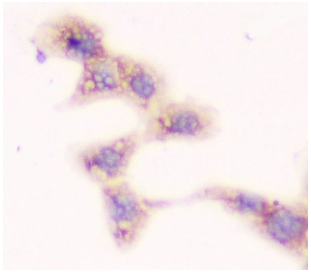
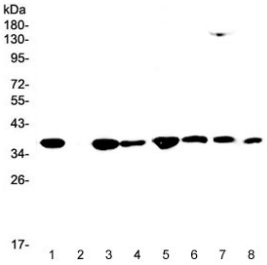


ICC testing of FFPE human A431 cells with SMN1/2 antibody. HIER: boil tissue sections in pH6, 10mM citrate buffer, for 10-20 min followed by cooling at RT for 20 min.



Western blot testing of human 1) HeLa, 2) placenta, 3) SW620, 4) PANC-1, 5) HepG2, 6) A549, 7) rat RH35 and 8) mouse HEPA1-6 lysate with SMN1/2 antibody at 0.5ug/ml. Expected molecular weight: 32-38 kDa.

Description

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 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 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.