

Alpha II Spectrin Antibody / Alpha Fodrin / SPTAN1 / NEAS [clone SPTAN1/3352] (V8096)

Catalog No.	Formulation	Size
V8096-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V8096-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V8096SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

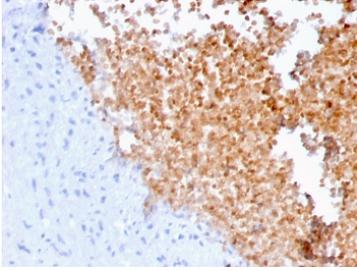
[Bulk quote request](#)

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2c, kappa
Clone Name	SPTAN1/3352
Purity	Protein G affinity chromatography
UniProt	Q13813
Localization	Cytoplasmic
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This Alpha II Spectrin antibody is available for research use only.

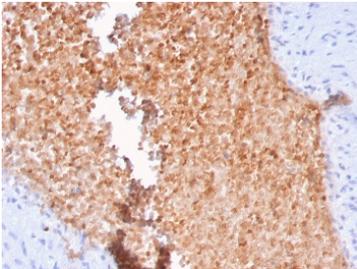
Human Protein Microarray Specificity Validation



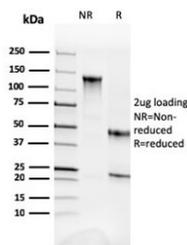
Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using SPTAN1 antibody (clone SPTAN1/3352). These results demonstrate the foremost specificity of the SPTAN1/3352 mAb. Z- and S- score: The Z-score represents the strength of a signal that an antibody (in combination with a fluorescently-tagged anti-IgG secondary Ab) produces when binding to a particular protein on the HuProt(TM) array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If the targets on the HuProt(TM) are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-scores. The S-score therefore represents the relative target specificity of an Ab to its intended target.



Immunohistochemistry of Alpha II Spectrin antibody in human lung tissue. FFPE human lung shows cytoplasmic HRP-DAB brown staining in epithelial and inflammatory cells, consistent with SPTAN1 localization along the submembranous cytoskeleton. Clone SPTAN1/3352 was used following heat-induced epitope retrieval by boiling tissue sections in pH 6, 10 mM citrate buffer for 20 minutes and allowing sections to cool prior to staining.



Alpha II Spectrin antibody IHC staining of FFPE human lung tissue using clone SPTAN1/3352. HIER: boil tissue sections in pH6, 10mM citrate buffer, for 20 min and allow to cool before testing.



SDS-PAGE analysis of purified, BSA-free Alpha II Spectrin antibody (clone SPTAN1/3352) as confirmation of integrity and purity.

Description

Alpha II Spectrin antibody recognizes Spectrin alpha chain, non-erythrocytic 1, also referred to as SPTAN1 antibody and Alpha Fodrin antibody, a large cytoskeletal scaffolding protein belonging to the spectrin family. Encoded by the SPTAN1 gene, this protein is widely expressed in non-erythroid tissues and localizes primarily to the cytoplasm and inner surface of the plasma membrane, where it forms heterodimers with beta spectrin to establish a supportive submembranous network. Alpha II Spectrin Antibody SPTAN1/3352 targets this structural protein for research applications investigating cytoskeletal organization and membrane stability.

Spectrin alpha chain, non-erythrocytic 1 plays a critical role in maintaining cell shape, mechanical integrity, and membrane protein positioning. By assembling into tetrameric spectrin complexes, SPTAN1 links transmembrane proteins to the actin cytoskeleton, thereby regulating membrane architecture and intracellular signaling. The protein is particularly abundant in neurons, where it contributes to axonal stability, synaptic organization, and dendritic structure. It is also present in epithelial and other somatic cell types, reflecting its essential role in non-erythroid cellular architecture.

Alpha-II spectrin participates in multiple signaling pathways through interactions with ion channels, adhesion molecules, and regulatory proteins. During apoptosis and neuronal injury, SPTAN1 is proteolytically cleaved by calpains and caspases, generating characteristic spectrin breakdown products that are widely studied as markers of cytoskeletal disruption. These cleavage events are relevant in neurodegenerative disease research, traumatic brain injury studies, and models of cellular stress.

The SPTAN1 gene is located on chromosome 9q33.2 and encodes a multidomain protein containing repetitive spectrin motifs that mediate dimerization and actin binding. Mutations in SPTAN1 have been associated with neurodevelopmental disorders, including epileptic encephalopathy and other neurological syndromes, underscoring its importance in neuronal maturation and stability. Altered spectrin organization has also been linked to changes in cell motility and tumor progression.

Clone SPTAN1/3352 is a monoclonal antibody that recognizes Alpha-II spectrin and supports detection of SPTAN1 expression in research models. By targeting this cytoskeletal scaffold, Alpha II Spectrin antibody facilitates studies of membrane organization, neuronal integrity, apoptosis-related proteolysis, and spectrin-dependent signaling pathways.

Application Notes

Optimal dilution of the Alpha II Spectrin antibody should be determined by the researcher.

Immunogen

A recombinant human partial protein (amino acids 2351-2475) was used as the immunogen for this SPTAN1 antibody.

Storage

Store the Alpha II Spectrin antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).