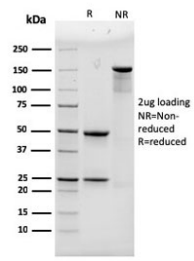
Alpha Actinin 4 Antibody / ACTN4 [clone 93] (V8177)

Catalog No.	Formulation	Size
V8177-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V8177-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V8177SAF-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
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG
Clone Name	93
Purity	Protein G affinity chromatography
UniProt	O43707
Localization	Nuclear, cytoplasmic
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This Alpha Actinin 4 antibody is available for research use only.



SDS-PAGE analysis of purified, BSA-free Alpha Actinin 4 antibody (clone 93) as confirmation of integrity and purity.

Description

Alpha Actinin 4 antibody detects alpha actinin 4, a cytoskeletal protein encoded by the ACTN4 gene. Alpha actinin 4 belongs to the spectrin family of actin-binding proteins and functions as a crosslinker of actin filaments. It contributes to

cellular architecture, motility, and adhesion, while also participating in transcriptional regulation and signaling. Because mutations and dysregulation of ACTN4 are linked to cancer progression and kidney disease, Alpha Actinin 4 antibody is widely used in cytoskeletal biology, oncology, and nephrology research.

Alpha actinin 4 is expressed in many tissues but is particularly enriched in podocytes, smooth muscle, and epithelial cells. Structurally, it is a homodimer with an actin-binding domain at the N-terminus, spectrin repeats in the central region, and calmodulin-like EF-hand domains at the C-terminus. This modular structure allows alpha actinin 4 to link actin filaments to integrins and other membrane proteins, supporting focal adhesion dynamics and mechanotransduction. In addition to structural roles, it shuttles to the nucleus, where it can influence gene expression.

The Alpha Actinin 4 antibody clone 93 provides consistent and specific detection of ACTN4. Clone 93 has been referenced in peer-reviewed studies exploring podocyte injury, invasive cancer cell behavior, and actin cytoskeletal regulation. Its reliable performance supports applications in immunohistochemistry, immunoblotting, and cell biology experiments where actin network dynamics are central.

Research using clone 93 has highlighted how mutations in ACTN4 cause autosomal dominant focal segmental glomerulosclerosis, a kidney disorder characterized by proteinuria and podocyte dysfunction. In oncology, alpha actinin 4 overexpression enhances motility and invasion, correlating with poor prognosis in several cancers. Studies employing this antibody have clarified how ACTN4 integrates cytoskeletal remodeling with transcriptional programs that promote metastasis.

NSJ Bioreagents provides this Alpha Actinin 4 antibody to support research in cytoskeletal biology, oncology, and nephrology. Alternate names include ACTN4 antibody, actinin alpha 4 antibody, non-muscle alpha actinin antibody, focal adhesion actin-binding protein antibody, and podocyte cytoskeleton regulator antibody.

Application Notes

Optimal dilution of the Alpha Actinin 4 antibody should be determined by the researcher.

Immunogen

A recombinant full-length human ACTN4 protein was used as the immunogen for this Alpha Actinin 4 antibody.

Storage

Store the Alpha Actinin 4 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).