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ACTN4 Antibody (N-term) Blocking Peptide

Synthetic peptide
Catalog # BP7790a

Specification

ACTN4 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession O43707

ACTN4 Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 81

Other Names
Alpha-actinin-4, F-actin cross-linking protein, Non-muscle alpha-actinin 4, ACTN4

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7790a was selected from the N-term region of human ACTN4. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

ACTN4 Antibody (N-term) Blocking Peptide - Protein Information

Name ACTN4 (HGNC:166)

Function
F-actin cross-linking protein which is thought to anchor actin to a variety of intracellular structures. This is a bundling protein (Probable). Probably involved in vesicular trafficking via its association with the CART complex. The CART complex is necessary for efficient transferrin receptor recycling but not for EGFR degradation (PubMed:15772161). Involved in tight junction assembly in epithelial cells probably through interaction with MICALL2. Links MICALL2 to the actin cytoskeleton and recruits it to the tight junctions (By similarity). May also function as a transcriptional coactivator, stimulating transcription mediated by the nuclear hormone receptors PPARG and RARA (PubMed:22351778). Association with IGSF8 regulates the immune synapse formation and is required for efficient T-cell activation (PubMed:22689882).

Cellular Location
Nucleus. Cytoplasm. Cell junction {ECO:0000250|UniProtKB:P57780}. Cytoplasm, cytoskeleton, stress fiber. Cytoplasm, perinuclear region {ECO:0000250|UniProtKB:P57780}. Note=Localized in cytoplasmic mRNP granules containing untranslated mRNAs. Expressed in the perinuclear rim and manchette structure in early elongating spermatids during spermiogenesis (By similarity). Nuclear translocation can be induced by the PI3 kinase inhibitor wortmannin or by cytochalasin D. Exclusively localized in the nucleus in a limited number of cell lines (breast cancer cell line MCF-7, oral floor cancer IMC-2, and bladder cancer KU- 7). {ECO:0000250|UniProtKB:P57780, ECO:0000269|PubMed:17289661, ECO:0000269|PubMed:9508771}

Tissue Location
Widely expressed..

ACTN4 Antibody (N-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

ACTN4 Antibody (N-term) Blocking Peptide - Images

ACTN4 Antibody (N-term) Blocking Peptide - Background

Alpha actinins belong to the spectrin gene superfamily which represents a diverse group of cytoskeletal proteins, including the alpha and beta spectrins and dystrophins. Alpha actinin is an actin-binding protein with multiple roles in different cell types. In nonmuscle cells, the cytoskeletal isoform is found along microfilament bundles and adherens-type junctions, where it is involved in binding actin to the membrane. In contrast, skeletal, cardiac, and smooth muscle isoforms are localized to the Z-disc and analogous dense bodies, where they help anchor the myofibrillar actin filaments. This protein is a nonmuscle, alpha actinin isoform which is concentrated in the cytoplasm, and is thought to be involved in metastatic processes. Mutations in the gene encoding this protein have been associated with focal and segmental glomerulosclerosis.

ACTN4 Antibody (N-term) Blocking Peptide - References

Kikuchi,S., Clin. Cancer Res. 14 (17), 5348-5356 (2008)Barbolina,M.V., Lab. Invest. 88 (6), 602-614 (2008)Kimura,M., Intern. Med. 47 (12), 1099-1106 (2008)