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# Anti-Alpha Actinin 4 Picoband Antibody

Catalog # ABO12659

## Product Information

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| **Application** | WB, IHC-P |
| **Primary Accession** | O43707 |
| **Host** | Rabbit |
| **Reactivity** | Human, Mouse, Rat |
| **Clonality** | Polyclonal |
| **Format** | Lyophilized |
| **Description** | Rabbit IgG polyclonal antibody for Alpha-actinin-4(ACTN4) detection. Tested with WB, IHC-P in Human;Mouse;Rat. |
| **Reconstitution** | Add 0.2ml of distilled water will yield a concentration of 500ug/ml. |

## Additional Information

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| **Gene ID** | 81 |
| **Other Names** | Alpha-actinin-4, Non-muscle alpha-actinin 4, ACTN4 (HGNC:166) |
| **Calculated MW** | 104854 |
| **Application Details** | Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, Mouse, Rat, By Heat<br><br>Western blot, 0.1-0.5 □g/ml, Human, Mouse, Rat |
| **Subcellular Localization** | Nucleus . Cytoplasm . Cell junction . Localized in cytoplasmic mRNP granules containing untranslated mRNAs. Colocalizes with actin stress fibers. 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). . |
| **Tissue Specificity** | Widely expressed. . |
| **Source** | Eukaryota |
| **Protein Name** | Alpha-actinin-4 |
| **Contents** | Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3. |
| **Immunogen** | E.coli-derived human Alpha Actinin 4 recombinant protein (Position: E561-V661). Human Alpha Actinin 4 shares 99% and 98% amino acid (aa) sequence identity with mouse and rat Alpha Actinin 4, respectively. |

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| **Purification** | Immunogen affinity purified. |
| **Cross Reactivity** | No cross reactivity with other proteins |
| **Storage** | At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing. |

## Protein Information

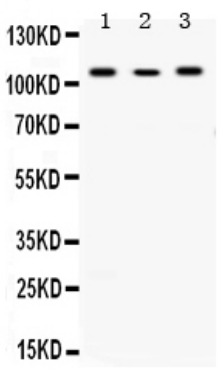
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|---|---|
| **Name** | ACTN4 ( HGNC:166) |
| **Function** | F-actin cross-linking protein which is thought to anchor actin to a variety of intracellular structures. This is a bundling protein (Probable). Probably involved in vesicular trafficking via 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.. |

## Background

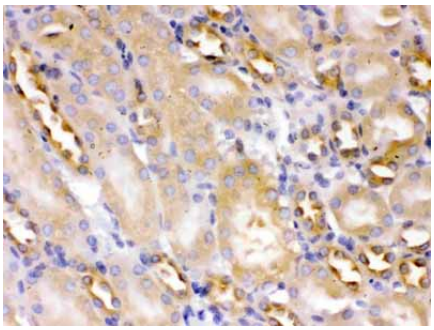
Alpha-actinin-4 is a protein that in humans is encoded by the ACTN4 gene. Alpha actinins belong to the spectrin gene superfamily which represents a diverse group of cytoskeletal proteins, including the alpha and beta spectrins and dystrophins. Alpha actinin is an actin-binding protein with multiple roles 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 ACTN4 gene encodes a nonmuscle, alpha actinin isoform which is concentrated in the cytoplasm, and thought to be involved in metastatic processes. Mutations in this gene have been associated with focal and segmental glomerulosclerosis.

## Images

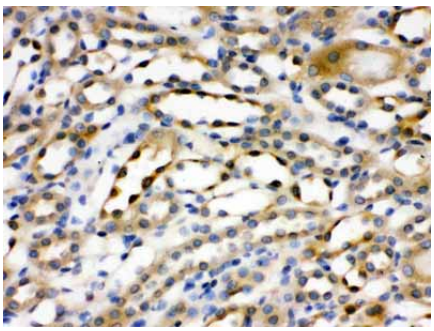
Western blot analysis of Alpha Actinin 4 expression in rat liver extract (lane 1), NEURO whole cell lysates (lane 2) and RAJI whole cell lysates (lane 3). Alpha Actinin 4 at 105KD was detected using rabbit anti- Alpha Actinin 4



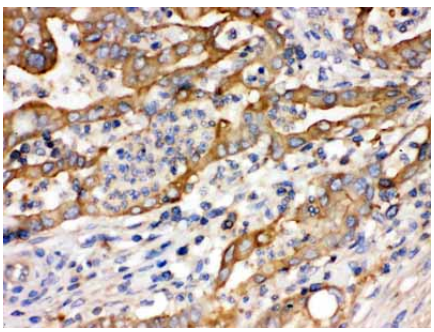

Antigen Affinity purified polyclonal antibody (Catalog # ABO12659) at 0.5 ??g/mL. The blot was developed using chemiluminescence (ECL) method .



Alpha Actinin 4 was detected in paraffin-embedded sections of mouse kidney tissues using rabbit anti- Alpha Actinin 4 Antigen Affinity purified polyclonal antibody (Catalog # ABO12659) at 1 □¼g/mL. The immunohistochemical section was developed using SABC method .



Alpha Actinin 4 was detected in paraffin-embedded sections of rat kidney tissues using rabbit anti- Alpha Actinin 4 Antigen Affinity purified polyclonal antibody (Catalog # ABO12659) at 1 □¼g/mL. The immunohistochemical section was developed using SABC method .



Alpha Actinin 4 was detected in paraffin-embedded sections of human intestinal cancer tissues using rabbit anti- Alpha Actinin 4 Antigen Affinity purified polyclonal antibody (Catalog # ABO12659) at 1 □¼g/mL. The immunohistochemical section was developed using SABC method .

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.