

**ACTN4 Antibody (clone 4D10)**  
**Mouse Monoclonal Antibody**  
**Catalog # ALS14018****Specification**

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**ACTN4 Antibody (clone 4D10) - Product Information**

Application	WB, IF, IHC
Primary Accession	<a href="#">O43707</a>
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Calculated MW	105kDa KDa

**ACTN4 Antibody (clone 4D10) - Additional Information****Gene ID** 81**Other Names**

Alpha-actinin-4, Non-muscle alpha-actinin 4, ACTN4 ([http://www.genenames.org/cgi-bin/gene\\_symbol\\_report?hgnc\\_id=166](http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=166) target="\_blank">HGNC:166</a>)

**Target/Specificity**

Human ACTN4

**Reconstitution & Storage**

Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles.

**Precautions**

ACTN4 Antibody (clone 4D10) is for research use only and not for use in diagnostic or therapeutic procedures.

**ACTN4 Antibody (clone 4D10) - 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: <http://www.uniprot.org/citations/15772161> target="\_blank">15772161</a>). 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: <http://www.uniprot.org/citations/22351778> target="\_blank">22351778</a>).

**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

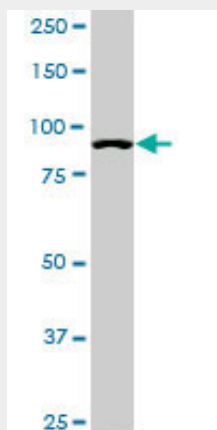
Widely expressed..

#### ACTN4 Antibody (clone 4D10) - Protocols

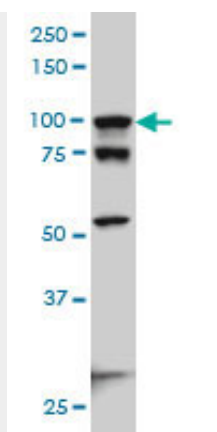
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

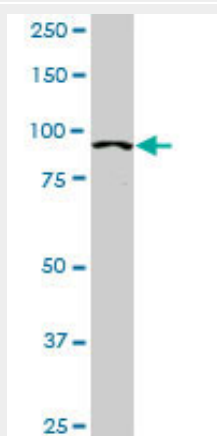
#### ACTN4 Antibody (clone 4D10) - Images



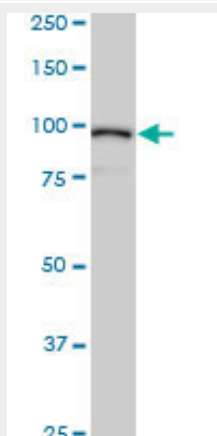
ACTN4 monoclonal antibody (M01), clone 4D10. Western blot of ACTN4 expression in PC-12.



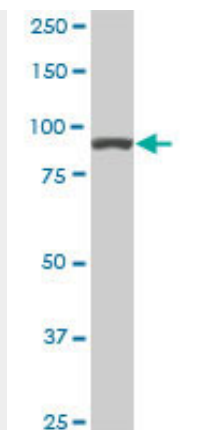
ACTN4 monoclonal antibody (M01), clone 4D10 Western blot of ACTN4 expression in HeLa NE.



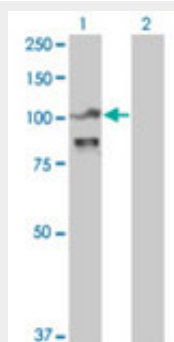
ACTN4 monoclonal antibody (M01), clone 4D10. Western blot of ACTN4 expression in Raw 264.7.



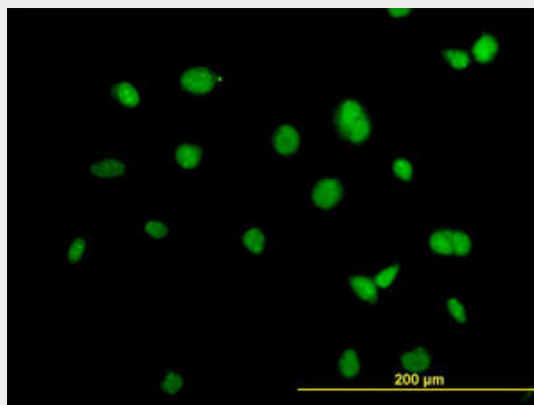
ACTN4 monoclonal antibody (M01), clone 4D10. Western blot of ACTN4 expression in MCF-7.



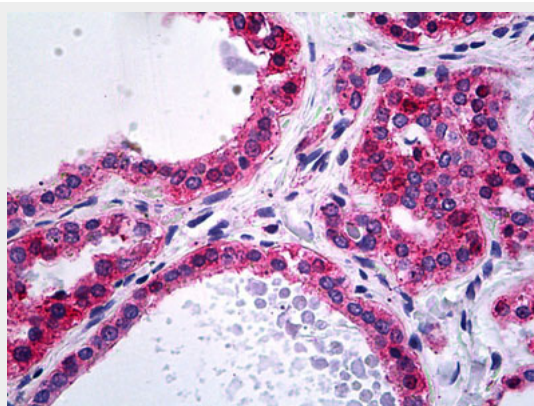
ACTN4 monoclonal antibody (M01), clone 4D10. Western blot of ACTN4 expression in NIH/3T3.



Western blot of ACTN4 expression in transfected 293T cell line by ACTN4 monoclonal antibody...



Immunofluorescence of monoclonal antibody to ACTN4 on HeLa cell. [antibody concentration 20 ug/ml]



Anti-ACTN4 / Alpha-Actinin-4 antibody IHC of human thyroid.

#### **ACTN4 Antibody (clone 4D10) - Background**

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).

#### **ACTN4 Antibody (clone 4D10) - References**

Nikolopoulos S.N.,et al.Oncogene 19:380-386(2000).  
Aksenova V.I.U.,et al.Tsitologija 54:25-32(2012).  
Chakraborty S.,et al.Submitted (MAR-2006) to the EMBL/GenBank/DBJ databases.  
Grimwood J.,et al.Nature 428:529-535(2004).  
Bechtel S.,et al.BMC Genomics 8:399-399(2007).