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Cortactin Rabbit mAb

Catalog # AP75280

Product Information

Application	WB, IHC-P, IHC-F, FC, IP
Primary Accession	Q14247
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	61586

Additional Information

Gene ID	2017
Other Names	CTTN
Dilution	WB~~1:1000-1:5000 IHC-P~~N/A IHC-F~~N/A FC~~1:20 IP~~1:20-1:50
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

Name	CTTN
Synonyms	EMS1
Function	Contributes to the organization of the actin cytoskeleton and cell shape (PubMed:21296879). Plays a role in the formation of lamellipodia and in cell migration. Plays a role in the regulation of neuron morphology, axon growth and formation of neuronal growth cones (By similarity). Through its interaction with CTTNBP2, involved in the regulation of neuronal spine density (By similarity). Plays a role in focal adhesion assembly and turnover (By similarity). In complex with ABL1 and MYLK regulates cortical actin-based cytoskeletal rearrangement critical to sphingosine 1-phosphate (S1P)-mediated endothelial cell (EC) barrier enhancement (PubMed:20861316). Plays a role in intracellular protein transport and endocytosis, and in modulating the levels of potassium channels present at the cell membrane (PubMed:17959782). Plays a role in receptor-mediated endocytosis via clathrin-coated pits (By similarity). Required for stabilization

of KCNH1 channels at the cell membrane (PubMed:23144454). Plays a role in the invasiveness of cancer cells, and the formation of metastases (PubMed:16636290).

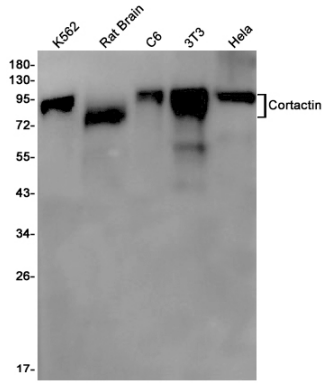
Cellular Location

Cytoplasm, cytoskeleton. Cell projection, lamellipodium. Cell projection, ruffle. Cell projection, dendrite. Cell projection {ECO:0000250|UniProtKB:Q66HL2}. Cell membrane; Peripheral membrane protein; Cytoplasmic side. Cell projection, podosome {ECO:0000250|UniProtKB:Q01406}. Cell junction {ECO:0000250|UniProtKB:Q66HL2}. Cell junction, focal adhesion {ECO:0000250|UniProtKB:Q66HL2}. Membrane, clathrin-coated pit {ECO:0000250|UniProtKB:Q66HL2}. Cell projection, dendritic spine. Cytoplasm, cell cortex Endoplasmic reticulum {ECO:0000250|UniProtKB:Q01406}. Note=Colocalizes transiently with PTK2/FAK1 at focal adhesions (By similarity) Associated with membrane ruffles and lamellipodia. In the presence of CTTNBP2NL, colocalizes with stress fibers (By similarity). In the presence of CTTNBP2, localizes at the cell cortex (By similarity). In response to neuronal activation by glutamate, redistributes from dendritic spines to the dendritic shaft (By similarity). Colocalizes with DNM2 at the basis of filopodia in hippocampus neuron growth zones (By similarity). {ECO:0000250|UniProtKB:Q60598, ECO:0000250|UniProtKB:Q66HL2}

Background

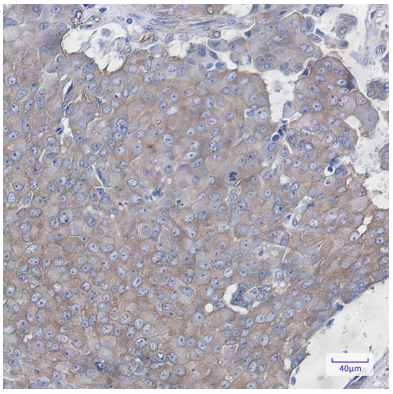
Cortactin is an 80/85 kDa cytoskeleton protein that facilitates assembly of cortical actin. Cortactin is widely expressed in most adherent cells and is a prominent substrate of protein tyrosine kinase Src in vivo and in vitro. The protein sequence of cortactin contains multiple amino terminal tandem repeats of a unique 37 amino acid sequence, which associates with actin, and a Src homology 3 (SH3) domain at the carboxyl terminus. Between the repeat and the SH3 domain, there is an alpha helical structure followed by a proline rich region. Between the proline rich region and the SH3 domain, there are a series of Src phosphorylation sites (Tyr421, Tyr470, and Tyr486). In vitro, cortactin binds to and cross links F actin into meshworks.

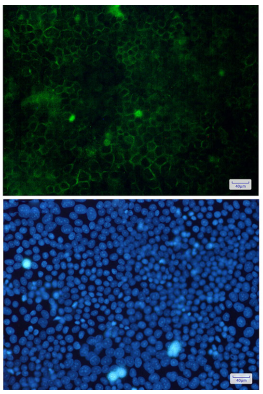
Images



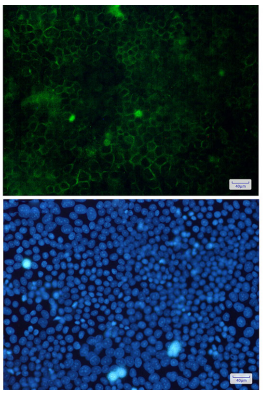
Western blot analysis of Cortactin in K562, rat Brain, C6, 3T3, Hela lysates using Cortactin antibody.

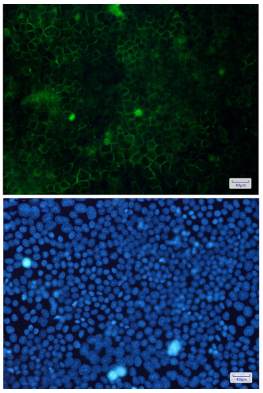
Immunohistochemistry analysis of paraffin-embedded Human breast cancer using Cortactin antibody.High-pressure and temperature Sodium Citrate pH 6.0 was used for antigen retrieval.





Immunocytochemistry analysis of Cortactin(green) in Hela using Cortactin antibody,and DAPI(blue)





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