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MACF1/ACF7 Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP57139

Specification

MACF1/ACF7 Polyclonal Antibody - Product Information

Application	**IHC-P, IHC-F, IF, ICC, E**
Primary Accession	Q9QXZ0
Reactivity	**Rat, Bovine**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**839 KDa**
Physical State	**Liquid**
Immunogen	**KLH conjugated synthetic peptide derived from human MACF1/ACF7**
Epitope Specificity	**1-100/7388**
Isotype	**IgG**

Purity
affinity purified by Protein A

Buffer	**0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.**
SUBCELLULAR LOCATION	**Cytoplasmic, microtubule. Plasma membrane. Golgi apparatus.**
Important Note	**This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.**

Background Descriptions
Microtubule-actin crosslinking factor 1 (MACF1/ACF7) belongs to spectraplakin family of proteins which also includes mammalian Bpag1/dystonin, Drosophila Short Stop (Shot) and Caenorhabditis elegans Vab-10. These are large actin-microtubule linker molecules that are essential for various biological processes such as neuronal degeneration, wound healing, gastrulation. MACF1, located on mouse chromosome 4D2.2, was found to play an important role during neurogenesis- it was shown that MACF1 regulates the organization of neuronal microtubules which is essential for axon extension. Furthermore, MACF1 is required in controlling focal adhesion assembly and dynamics. MACF1 behaves as an actin-regulated ATPase and it has the ability to target microtubules that track along F-actin to focal adhesions. MACF1 was also implicated in regulating filopodia formation.

MACF1/ACF7 Polyclonal Antibody - Additional Information

Other Names
Microtubule-actin cross-linking factor 1, Actin cross-linking family 7, Macf1, Acf7, Aclp7, Macf

Dilution
IHC-P~~N/A<br \>IHC-F~~N/A<br \>IF~~1:50~200<br \>ICC~~N/A<br \>E~~N/A

Storage
Store at -20 ℃ for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 ℃.

MACF1/ACF7 Polyclonal Antibody - Protein Information

Name Macf1 {ECO:0000312|MGI:MGI:108559}

Function
[Isoform 2]: F-actin-binding protein which plays a role in cross-linking actin to other cytoskeletal proteins and also binds to microtubules (PubMed:16815997, PubMed:18854161, PubMed:21295697). Plays an important role in ERBB2-dependent stabilization of microtubules at the cell cortex (By similarity). Acts as a positive regulator of Wnt receptor signaling pathway and is involved in the translocation of AXIN1 and its associated complex (composed of APC, CTNNB1 and GSK3B) from the cytoplasm to the cell membrane (PubMed:16815997). Has actin- regulated ATPase activity and is essential for controlling focal adhesions (FAs) assembly and dynamics (PubMed:18854161). Interaction with CAMSAP3 at the minus ends of non-centrosomal microtubules tethers microtubules minus-ends to actin filaments, regulating focal adhesion size and cell migration (By similarity). May play role in delivery of transport vesicles containing GPI-linked proteins from the trans-Golgi network through its interaction with GOLGA4 (By similarity). Plays a key role in wound healing and epidermal cell migration (PubMed:21295697). Required for efficient upward migration of bulge cells in response to wounding and this function is primarily rooted in its ability to coordinate microtubule dynamics and polarize hair follicle stem cells (PubMed:21295697). As a regulator of actin and microtubule arrangement and stabilization, it plays an essential role in neurite outgrowth, branching and spine formation during brain development (PubMed:26526844).

Cellular Location
[Isoform 2]: Cytoplasm. Cytoplasm, cytoskeleton. Golgi apparatus {ECO:0000250|UniProtKB:Q9UPN3}. Cell membrane {ECO:0000250|UniProtKB:Q9UPN3}. Cell projection, ruffle membrane {ECO:0000250|UniProtKB:Q9UPN3}. Note=APC controls its localization to the cell membrane which is critical for its function in microtubule stabilization. Localizes to the tips of microtubules. Associated with the minus-end of microtubules via interaction with CAMSAP3. The phosphorylated form is found in the cytoplasm while the non- phosphorylated form associates with the microtubules {ECO:0000250|UniProtKB:Q9UPN3}

Tissue Location
Enriched in the hair follicle stem cells (at protein level). Isoform 1 and isoform 2 are ubiquitous expressed, with higher levels seen in lung, heart, thymus, spleen and brain

MACF1/ACF7 Polyclonal Antibody - Protocols

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

- Western Blot
- Blocking Peptides

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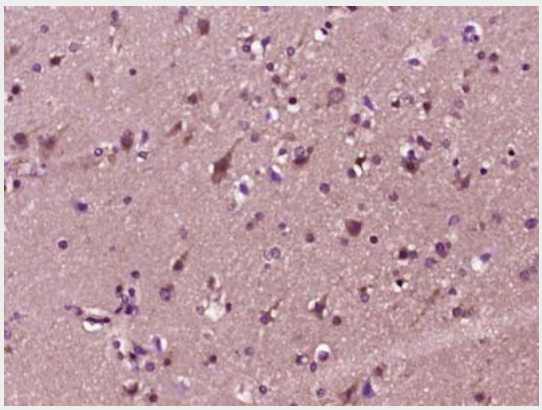
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

MACF1/ACF7 Polyclonal Antibody - Images



Paraformaldehyde-fixed, paraffin embedded (Human brain glioma); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (MACF1) Polyclonal Antibody, Unconjugated (bs-18545R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.