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Anti-Gamma-actin-1 Antibody

Catalog # AP59472

Product Information

Application	WB, IHC, IF/IC
Primary Accession	P60709
Other Accession	Q9BYX7, P63261
Reactivity	Human, Mouse, Rat, Rabbit, Pig, Chicken, Bovine, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	41737

Additional Information

Gene ID	60
Other Names	ACTB; Actin, cytoplasmic 1; Beta-actin; POTEKP; ACTBL3; FKSG30; Putative beta-actin-like protein 3; Kappa-actin; POTE ankyrin domain family member K; ACTG1; ACTB; ACTG; Actin, cytoplasmic 2; Gamma-actin
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human Gamma-actin-1. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000), IHC (1/100 - 1/200) IHC~~WB (1/500 - 1/1000), IHC (1/100 - 1/200) IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

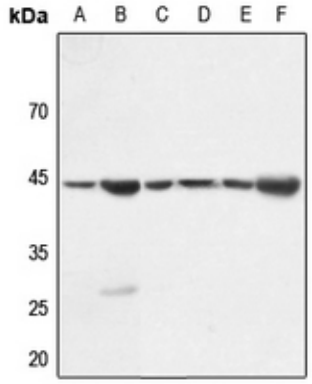
Name	ACTB
Function	Actin is a highly conserved protein that polymerizes to produce filaments that form cross-linked networks in the cytoplasm of cells (PubMed:25255767, PubMed:29581253). Actin exists in both monomeric (G-actin) and polymeric (F-actin) forms, both forms playing key functions, such as cell motility and contraction (PubMed:29581253). In addition to their role in the cytoplasmic cytoskeleton, G- and F- actin also localize in the nucleus, and regulate gene transcription and motility and repair of damaged DNA (PubMed:29925947). Plays a role in the assembly of the gamma-tubulin ring complex (gTuRC), which regulates the minus-end nucleation of alpha-beta tubulin heterodimers that grow into microtubule protafilaments (PubMed:39321809, PubMed:38609661). Part of the ACTR1A/ACTB filament around which the dynactin complex is built (By similarity). The dynactin multiprotein complex

activates the molecular motor dynein for ultra-processive transport along microtubules (By similarity).

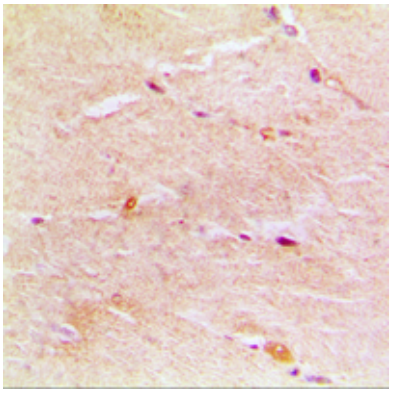
Cellular Location

Cytoplasm, cytoskeleton. Nucleus Note=Localized in cytoplasmic mRNP granules containing untranslated mRNAs.

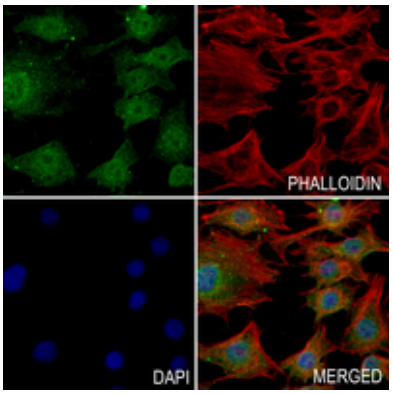
Images



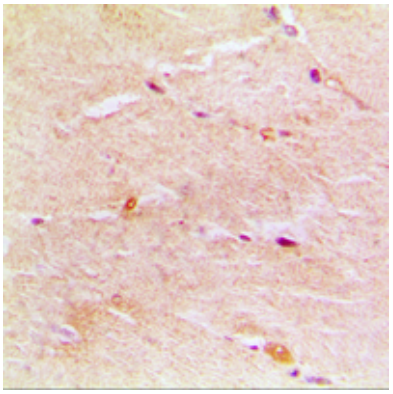
Western blot analysis of Gamma-actin-1 expression in HEK293T (A), Hela (B), mouse brain (C), rat muscle (D), rat brain (E), rat spleen (F) whole cell lysates. (Predicted band size: 41; 42 kD; Observed band size: 42 kD)



Immunohistochemical analysis of Gamma-actin-1 staining in human muscle formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of Gamma-actin-1 staining in NIH3T3 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).



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