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ACTB Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP10168a

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	P60709
Other Accession	A2BDB0, P63259, P63260, P63261, Q5ZMQ2, P63258, P60711, Q6QAQ1, P60710, Q4R561, P60706, P60712, P53505, NP_001092.1
Reactivity	Human, Mouse, Rat
Predicted	Mouse, Rat, Monkey, Pig, Chicken, Bovine, Xenopus
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	41737

Additional Information

Gene ID	60
Other Names	Actin, cytoplasmic 1, Beta-actin, Actin, cytoplasmic 1, N-terminally processed, ACTB
Target/Specificity	This ACTB antibody is generated from rabbits immunized with a recombinant protein from human ACTB.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ACTB Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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.

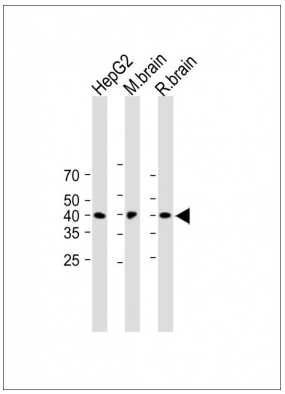
Background

This gene encodes one of six different actin proteins. Actins are highly conserved proteins that are involved in cell motility, structure, and integrity. This actin is a major constituent of the contractile apparatus and one of the two nonmuscle cytoskeletal actins.

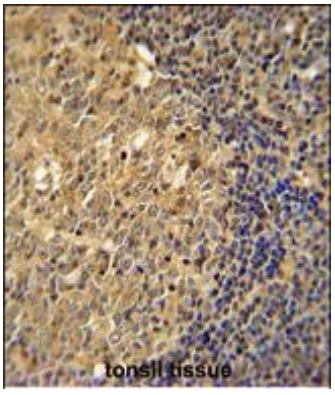
References

Martins-de-Souza, D., et al. J Psychiatr Res 44(14):989-991(2010) Ambrosino, C., et al. Mol. Cell Proteomics 9(6):1352-1367(2010) Yoo, Y., et al. Oncogene 29(2):263-272(2010) Boratynska, A., et al. Acta Virol. 54(1):41-48(2010) Dugina, V., et al. J. Cell. Sci. 122 (PT 16), 2980-2988 (2009) :

Images

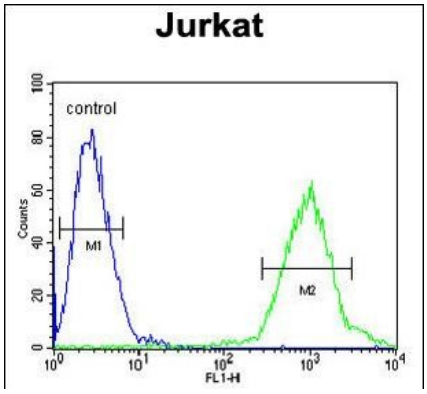


All lanes : Anti-ACTB Antibody (N-term) at 1:1000 dilution Lane 1: HepG2 whole cell lysate Lane 2: Mouse brain lysate Lane 3: Rat brain lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size : 42kDa Blocking/Dilution buffer: 13% NFDM/TBST.



ACTB Antibody (Cat. #AP10168a) immunohistochemistry analysis in formalin fixed and paraffin embedded human tonsil tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the ACTB Antibody for immunohistochemistry. Clinical relevance has not been evaluated.

ACTB Antibody (Cat. #AP10168a) flow cytometric analysis of Jurkat cells (right histogram) compared to a negative



control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Citations

- Nonstructural Protein NS1 of Influenza Virus Disrupts Mitochondrial Dynamics and Enhances Mitophagy via ULK1 and BNIP3
- Effect of 5-caffeoylquinic acid on the NF-κB signaling pathway, peroxisome proliferator-activated receptor gamma 2, and macrophage infiltration in high-fat diet-fed Sprague-Dawley rat adipose tissue.
- Layer 2/3 pyramidal cells in the medial prefrontal cortex moderate stress induced depressive behaviors.
- Cysteine-rich protein 61 regulates adipocyte differentiation from mesenchymal stem cells through mammalian target of rapamycin complex 1 and canonical Wnt signaling.
- Expression of pituitary tumor-transforming 2 in human glioblastoma cell lines and its role in glioblastoma tumorigenesis.