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Beta-Actin Antibody

Mouse Monoclonal Antibody (Mab)
Catalog # AW5280

Product Information

Application	WB
Primary Accession	P60709
Other Accession	A2BDB0, P63259, P63260, P63261, Q5ZMQ2, P63258, P60711, Q6QAQ1, P60710, Q4R561, P60706, P60712, P53505
Reactivity	Human, Rat
Predicted	Mouse
Host	Mouse
Clonality	Monoclonal
Calculated MW	41737
Isotype	IgG1,Igk
Antigen Source	HUMAN

Additional Information

Gene ID	60
Antigen Region	11-395
Other Names	ACTB; Actin, cytoplasmic 1; Beta-actin; Actin, cytoplasmic 1, N-terminally processed
Dilution	WB~~1:1000
Target/Specificity	This ACTB Monoclonal antibody is generated from mouse immunized with ACTB recombinant protein.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, 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	Beta-Actin 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.

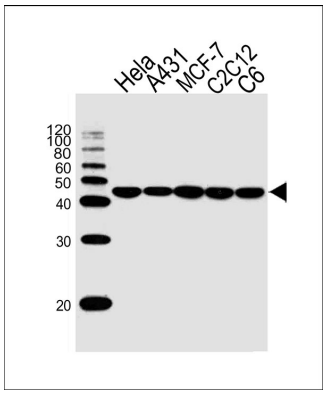
Background

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

Sex-specific proteome differences in the anterior cingulate cortex of schizophrenia. Martins-de-Souza D, et al. J Psychiatr Res, 2010 Apr 8. PMID 20381070. Identification of a hormone-regulated dynamic nuclear actin network associated with estrogen receptor alpha in human breast cancer cell nuclei. Ambrosino C, et al. Mol Cell Proteomics, 2010 Jun. PMID 20308691. Contribution of rearranged actin structures to the spread of Ectromelia virus infection in vitro. Boratynska A, et al. Acta Virol, 2010. PMID 20201613. Molecular mechanisms underlying nucleocytoplasmic shuttling of actinin-4. Kumeta M, et al. J Cell Sci, 2010 Apr 1. PMID 20197409. Tyrosine phosphorylation of cofilin at Y68 by v-Src leads to its degradation through ubiquitin-proteasome pathway. Yoo Y, et al. Oncogene, 2010 Jan 14. PMID 19802004.

Images



Western blot analysis of lysates from Hela,A431,MCF-7,mouse C2C12,rat C6 cell line (from left to right), using ACTB Antibody(Cat. #AW5280). AW5280 was diluted at 1:1000 at each lane. A goat anti-mouse IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody.

Citations

- Essential functions of Inositol hexakisphosphate (IP6) in Murine Leukemia Virus replication

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.