

beta-Actin Rabbit pAb, Loading Control

beta-Actin Rabbit pAb, Loading Control

Catalog # AP50879

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	P60709
Reactivity	Human, Mouse, Rat
Predicted	Chicken, Dog, Pig, Rabbit, Sheep, Bee, Fish, Guinea Pig, Hamster, Cat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	41737

Additional Information

Gene ID	60
Other Names	Actin, cytoplasmic 1, 3.6.4.-, Beta-actin, Actin, cytoplasmic 1, N-terminally processed, ACTB
Dilution	WB=1:5000-50000,IHC-P=1:200-1000,IHC-F=1:200-1000,ICC/IF=1:100-500,IF=1:200-1000,Flow-Cyt=1 μ g/Test
Storage	Store at -20 °C 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 °C.

Protein Information

Name	ACTB
Function	<p>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 protofilaments (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).</p> <p>Cytoplasm, cytoskeleton. Nucleus Note=Localized in cytoplasmic mRNP</p>

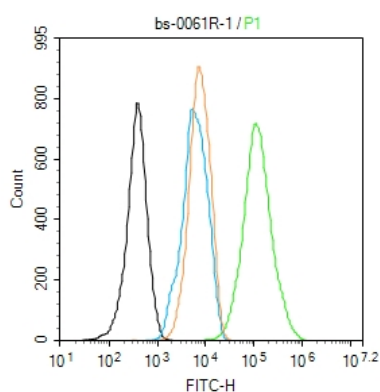
Background

Actin is a highly conserved protein and an essential component of cell cytoskeleton and plays an important role in cytoplasmic streaming, cell shape determination, cell division, organelle movement and extension growth. Preferentially expressed in young and expanding tissues, floral organ primordia, developing seeds and emerging inflorescence. Antibodies against plant Actin are useful as loading controls for Western Blotting.

References

- Ponte P., et al. Nucleic Acids Res. 12:1687-1696(1984).
 Nakajima-Iijima S., et al. Proc. Natl. Acad. Sci. U.S.A. 82:6133-6137(1985).
 Ohmori H., et al. J. Cell Biol. 116:933-941(1992).
 Hillier L.W., et al. Nature 424:157-164(2003).
 Gevaert K., et al. Nat. Biotechnol. 21:566-569(2003).

Images



Blank control: NIH/3T3.

Primary Antibody (green line): Rabbit Anti-beta-Actin (Loading Control) antibody (AP50879)

Dilution: 1 µg /10⁶ cells;

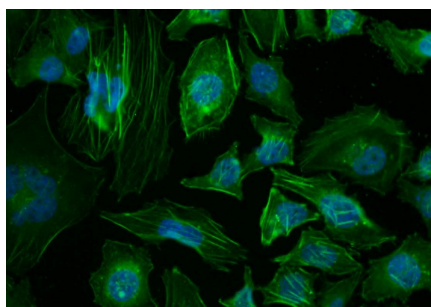
Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody : Goat anti-rabbit IgG-AF488

Dilution: 1 µg /test.

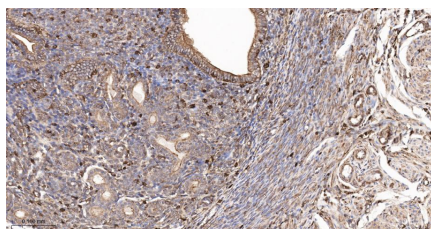
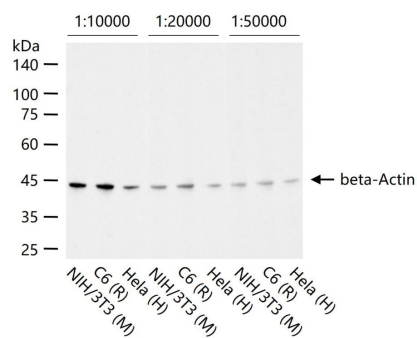
Protocol

The cells were fixed with 4% PFA (10min at room temperature) and then permeabilized with 90% ice-cold methanol for 20 min at -20°C. The cells were then incubated in 5% BSA to block non-specific protein-protein interactions for 30 min at room temperature. Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.



Tissue/cell: Hela cell; 4% Paraformaldehyde-fixed; Triton X-100 at room temperature for 20 min; Blocking buffer (normal goat serum, C-0005) at 37°C for 20 min; Antibody incubation with (beta-Actin) polyclonal Antibody, Unconjugated (AP50879) 1:100, 90 minutes at 37°C; followed by a conjugated Goat Anti-Rabbit IgG-FITC antibody at 37°C for 90 minutes, DAPI (blue, C02-04002) was used to stain the cell nuclei.

25 µg total protein per lane of various lysates (see on figure) probed with beta-Actin polyclonal antibody, unconjugated (AP50879) at 1:10000-1:50000 dilution and 4°C overnight incubation. Followed by conjugated secondary antibody incubation at r.t. for 60 min.



Paraformaldehyde-fixed, paraffin embedded Mouse Uterus; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with beta-Actin Polyclonal Antibody, Unconjugated (AP50879) at 1:200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit, SP-0023) and DAB (C-0010) staining.

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