

β-Actin

Cat.No. 251 011; Monoclonal mouse antibody, 100 µg purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg purified IgG, lyophilized. Azide was added before lyophilization. For reconstitution add 100 µl H ₂ O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.
Applications	WB: 1 : 1000 up to 1 : 5000 (AP staining) IP: yes ICC: 1 : 500 IHC: not tested yet IHC-P/FFPE: not tested yet
Clone	130B4
Subtype	IgG1 (κ light chain)
Immunogen	Synthetic peptide corresponding to AA 2 to 16 from mouse β-Actin (UniProt Id: P60710)
Epitop	Epitop: AA 2 to 14 from mouse β-Actin (UniProt Id: P60710)
Reactivity	Reacts with: rat (P60711), mouse (P60710), zebrafish, human (P60709). Other species not tested yet.
Specificity	May cross-react to α- and γ-actin due to sequence homology.

TO BE USED IN VITRO / FOR RESEARCH ONLY
NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

The two major cytoskeletal proteins involved in cell motility are myosin and **actin**. Monomeric actin is a globular protein that is expressed in all eukaryotic cells. Actin is the major subunit of microfilaments, a major component of the cytoskeleton, and of thin filaments, part of the contractile apparatus in muscle cells.

Actin is involved in many cellular processes including cell motility, maintenance of cell shape, and organelle trafficking.

Three main groups of actin have been identified. α-actins are found in muscle tissues whereas β- and γ-actins co-exist in most cell types as components of the cytoskeleton.

Selected References SYSY Antibodies

TBC1D24 regulates axonal outgrowth and membrane trafficking at the growth cone in rodent and human neurons. Aprile D, Fruscione F, Baldassari S, Fadda M, Ferrante D, Falace A, Buhler E, Sartorelli J, Represa A, Baldelli P, Benfenati F, et al. Cell death and differentiation (2019) : . **WB; tested species: rat**

Selected General References

Sorting of beta-actin mRNA and protein to neurites and growth cones in culture. Bassell GJ, Zhang H, Byrd AL, Femino AM, Singer RH, Taneja KL, Lifshitz LM, Herman IM, Kosik KS The Journal of neuroscience : the official journal of the Society for Neuroscience (1998) 18(1): 251-65.

Regulation of the human beta-actin promoter by upstream and intron domains. Ng SY, Gunning P, Liu SH, Leavitt J, Kedes L Nucleic acids research (1989) 17(2): 601-15.

The nucleotide sequence of the rat cytoplasmic beta-actin gene. Nudel U, Zakut R, Shani M, Neuman S, Levy Z, Yaffe D Nucleic acids research (1983) 11(6): 1759-71.

The genes coding for the cardiac muscle actin, the skeletal muscle actin and the cytoplasmic beta-actin are located on three different mouse chromosomes. Czosnek H, Nudel U, Mayer Y, Barker PE, Pravtcheva DD, Ruddle FH, Yaffe D The EMBO journal (1983) 2(11): 1977-9.