

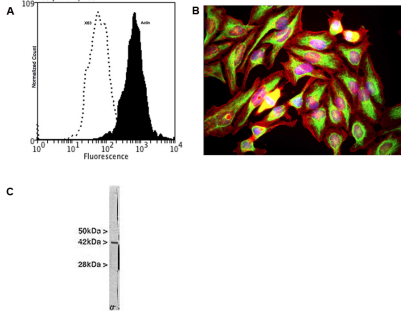


Mouse monoclonal antibody to Actin: IgG

Catalogue No.:	M-1646-100
Description:	Actin is one of the most abundant and highly conserved proteins of eukaryotes. Mammalian actins are the product of six different genes with differing distribution patterns in cell types and in tissues. The molecular weight of all six proteins is 42kDa, and one or more actins is found in essentially every type of crude cellular and tissue extract. As a result antibodies to actin are widely used as in western blotting standards. These can be used to verify that the various steps of the western blotting procedure have been performed correctly. In addition, actin is regarded as a "house keeping" protein which is generally not altered much in expression as a result of experimental manipulations. So quantitation of the actin band on the western is used as a standard against with the band density of other proteins can be compared. The monoclonal binds all six actin isotypes (ACTA1, ACTA2, ACTC1, ACTB, ACTG1 and ACTG2) very strongly on western blots. It is a very effective blotting standard which can work on any cell type or tissue extract. It also works in immunocytochemical experiments, binding strongly and cleanly to filopodia, membrane ruffles and stress fibers, all known to be rich in actin.
Unit size:	100 ug
Antigen:	Actin prepared from bovine brain.
Antibody Type:	Monoclonal
Isotype:	IgG1
Produced in:	Mouse
Applications:	Western Blotting (WB), Immunocytochemistry (IC) and Flow cytometry. A dilution of 1:5,000 - 1:10,000 is recommended for WB. A dilution of 1:500 - 1:1,000 is recommended for IC. Use 2 ug/10 ⁶ cells for Flow cytometry. Biosensis recommends optimal dilutions/concentrations should be determined by the end user.
Specificity:	The antibody reacts with a 42 kDa band by Western blot on a crude extract from HeLa cells. It has also been used successfully for immunocytochemistry.
Species Against:	Human, rat, mouse, porcine and bovine. It is expected that it will work on other mammal tissues.
Antibody Against:	Actin
Form:	Lyophilized from PBS. Contains 5% trehalose.
Appearance:	White powder
Reconstitution:	Reconstitute in sterile distilled water. Centrifuge to remove any insoluble material.
Storage:	After reconstitution of lyophilized antibody, aliquot and store at -20C for a higher stability. Avoid freeze-thaw cycles.
Expiry Date:	12 months after purchase
General References:	1. Vandekerckhove, J. and Weber, K. At least six different actins are expressed in a higher mammal: an analysis based on the amino acid. sequence of the amino-terminal tryptic peptide. J. Mol. Biol. 126:783-802 (1978).

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A: Specific staining of Actin expressed in human neuroblastoma SH-SY5Y cell line by Flow Cytometry using cat # M-1646-100. Fixing and Permeabilization of cells: Absolute methanol (10 minutes in ice) and 0.1% Tween-20 in PBS, Blocking: 1% BSA, Primary antibody: M-1646-100, 2 μ g per $\sim 10^6$ cells, 30 minutes at room temperature, Secondary antibody: Goat anti-mouse PE (1:100), 20 minutes in dark at room temperature. Negative control: Non-specific Control IgG, clone X63 (cat # M-1249-200, black dashed). Data and results were generated using Orflo MoxiflowTM instrument and protocols. B: HeLa cells stained with M-1646-100 (red) and also with our chicken polyclonal antibody to Vimentin (C-1409-50). The actin antibody stains the submembranous actin rich cytoskeleton and also stress fibers, bundles of actin associated with adhesion sites. The vimentin antibody stains a quite different cytoskeletal network, the intermediate filaments. The blue stain reveals DNA in the nuclei of these cells. C: Crude extract of HeLa cells. The antibody recognizes the ~ 42 kDa protein.

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