

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse, and rat β -Actin in Western blots.
Source	Monoclonal Mouse IgG ₁ Clone # 937215
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Peptide containing a sequence at the N-terminus of human β -Actin Accession # P60709
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μ m filtered solution in PBS.

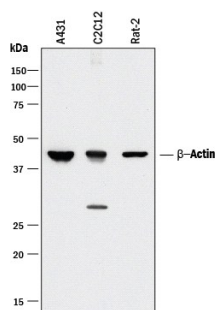
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	0.01 μ g/mL	See Below
Immunocytochemistry	0.1-25 μ g/mL	See Below
Simple Western	1 μ g/mL	See Below

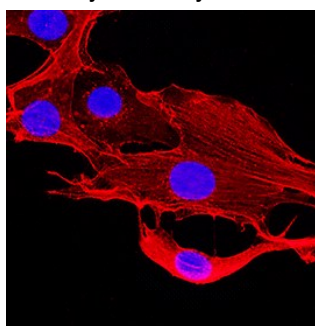
DATA

Western Blot



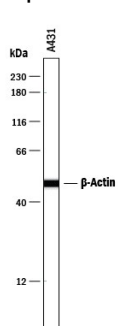
Detection of Human, Mouse, and Rat β -Actin by Western Blot. Western blot shows lysates of A431 human epithelial carcinoma cell line, C2C12 mouse myoblast cell line, and Rat-2 rat embryonic fibroblast cell line. PVDF membrane was probed with 0.01 μ g/mL of Mouse Anti-Human/Mouse/Rat β -Actin Monoclonal Antibody (Catalog # MAB8929) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for β -Actin at approximately 45 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunocytochemistry



β -Actin in NIH-3T3 Mouse Cell Line. β -Actin was detected in immersion fixed NIH-3T3 mouse embryonic fibroblast cell line using Mouse Anti-Human/Mouse/Rat β -Actin Monoclonal Antibody (Catalog # MAB8929) at 0.1 μ g/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Cells were fixated in methanol. Specific staining was localized to cytoskeleton.

Simple Western



Detection of Human β -Actin by Simple Western™. Simple Western lane view shows lysate of A431 human epithelial carcinoma cell line, loaded at 0.2 mg/mL. A specific band was detected for β -Actin at approximately 49 kDa (as indicated) using 1 μ g/mL of Mouse Anti-Human/Mouse/Rat β -Actin Monoclonal Antibody (Catalog # MAB8929). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Actin makes up the most abundant protein in many eukaryotic cell types. It polymerizes to form microfilaments that have an array of functions, including regulating contractility, motility, cytokinesis, phagocytosis, adhesion, cell morphology, and providing structural support. At least six types of Actin, falling into three categories, exist in higher eukaryotes. The three types, separated based on isoelectric point, include α (α -Skeletal, α -Cardiac, α -Smooth Muscle), β (β -Non-muscle) and γ (γ -Smooth Muscle, γ -non-muscle) isoforms. Non-muscle β - and γ -actin are also known as cytoplasmic actin.