

Purified anti- β -actin Antibody

Catalog# / Size	664801 / 25 μ g 664802 / 100 μ g
Clone	W16197A
Regulatory Status	RUO
Other Names	ACTB, Actin, cytoplasmic 1, Beta-actin
Isotype	Rat IgG2a, κ
Description	β -actin is a ubiquitously expressed and highly conserved 42 kD cytoplasmic protein involved in cell motility. This critical cytoskeletal component can be disrupted by drugs such as cytochalasin. Because β -actin is ubiquitously expressed in all eukaryotic cells, it is frequently used as a loading control for assays involving protein detection (such as Western blotting).

Product Details

Verified Reactivity	Human, Mouse, Rat, Zebrafish, Drosophila
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Human ACTB peptide (1-13 a.a.).
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	WB - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by Western blotting . For Western blotting, the suggested use of this reagent is 0.01 - 0.1 μ g/ml in human, mouse, rat and zebrafish and 0.1 - 0.5 μ g/ml in Drosophila. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	Reactivity to Drosophila was only verified with the purified format.
Product Citations	1. Balcioglu O, <i>et al.</i> 2020. Breast Cancer Res. 1.003472222. PubMed 2. Lippert TP, <i>et al.</i> 2021. Nat Commun. 0.855555556. PubMed
RRID	AB_2721350 (BioLegend Cat. No. 664801) AB_2721349 (BioLegend Cat. No. 664802)

Antigen Details

Structure	375 amino acids with a predicted molecular weight of 42 kD.
Distribution	Cytoplasm
Function	Actins are highly conserved proteins that are involved in cell motility.
Interaction	Interacts with CPNE1 and CPNE4, ERBB2, GCSAM, TBC1D21.
Biology Area	Cell Biology, Cell Motility/Cytoskeleton/Structure, Neuroscience, Neuroscience Cell Markers
Molecular Family	Microfilaments

Antigen References

1. Hanukoglu I, *et al.* 1983. *J. Mol. Biol.* 163:673.
2. Nakajima-ijima S, *et al.* 1985. *Proc. Natl. Acad. Sci.* 82:6133.
3. Ponte P, *et al.* 1984. *Nucleic Acids Res.* 12:1687.

Gene ID

[60](#)

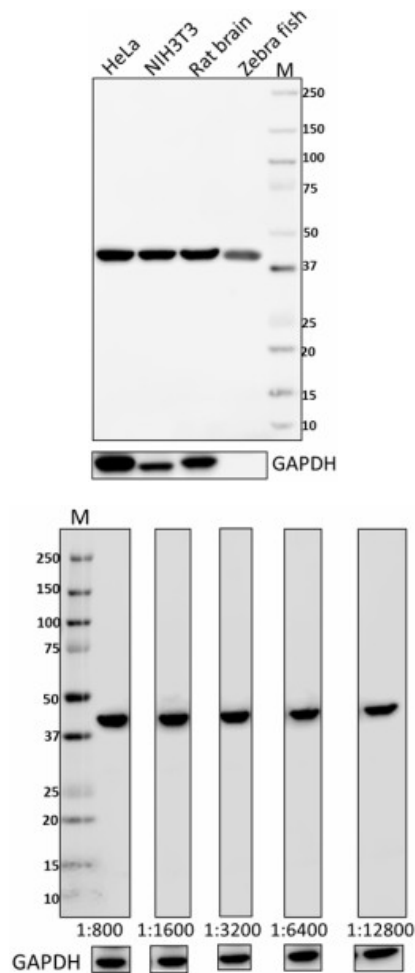
Related Protocols

[Western Blotting Protocol](#)

Other Formats

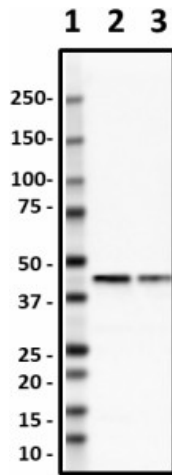
Purified anti- β -actin, Direct-Blot™ HRP anti- β -actin

Product Data



Total lysates (15 μ g protein) from HeLa, NIH3T3, rat brain and zebra fish were resolved by electrophoresis (4-20% Tris-glycine gel), transferred to nitrocellulose, and probed with 1:2000 diluted (0.1 μ g/mL) purified anti- β -actin antibody (upper). Proteins were visualized using an HRP anti rat-IgG secondary antibody (cat# 405405) or HRP Donkey anti-rabbit IgG Antibody (cat# 406401) for GAPDH and chemiluminescence detection. GAPDH (poly6314, cat# 631401) antibody was used as a loading control (lower). Lane M: MW ladder.

Total lysates (15 μ g protein) from HeLa was resolved by electrophoresis (4-20% Tris-glycine gel), transferred to nitrocellulose, and probed with 1:800 diluted (0.25 μ g/mL), 1:1600 diluted (0.125 μ g/mL), 1:3200 diluted (0.0625 μ g/mL), 1:6400 diluted (0.03125 μ g/mL) and 1:12800 diluted (0.0155 μ g/mL) purified anti- β -actin antibody (upper). Proteins were visualized using an HRP anti rat-IgG secondary antibody (cat# 405405) or HRP Donkey anti-rabbit IgG Antibody (cat# 406401) for GAPDH and chemiluminescence detection. GAPDH (poly6314, cat# 631401) antibody was used as a loading control (lower). Lane M: MW ladder.



Western blot of purified anti- β -actin antibody (clone W16197A). Lane 1: Molecular weight marker; Lane 2: 20 μ g of *Drosophila* head lysate; Lane 3: 20 μ g of *Drosophila* S2 (embryonic) cell lysate. The blot was incubated with 0.1 μ g/mL of the primary antibody overnight at 4°C, followed by incubation with HRP-labeled goat anti-rat IgG (Cat. No. 405405). Enhanced chemiluminescence was used as the detection system.

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