

Product datasheet for **TA336477**

beta Actin (ACTB) Rabbit Polyclonal Antibody

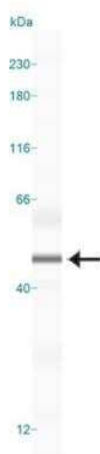
Product data:

Product Type:	Primary Antibodies
Applications:	ICC/IF, IHC, Simple Western, WB
Recommended Dilution:	Immunocytochemistry/ Immunofluorescence: 1:100, Simple Western: 1:12.5, Western Blot: 0.25-1 ug/ml, Immunohistochemistry-Paraffin: 10 ug/mL, Immunohistochemistry, Knockdown Validated
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Amino acids 2-16 (CDDIAALVIDNGSG) of actin protein were used as the immunogen.
Formulation:	PBS containing 0.05% BSA, 0.05% Sodium Azide. Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Concentration:	lot specific
Purification:	Protein G purified
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	actin, beta
Database Link:	NP_001092 Entrez Gene 11461 Mouse Entrez Gene 81822 Rat Entrez Gene 60 Human P60709

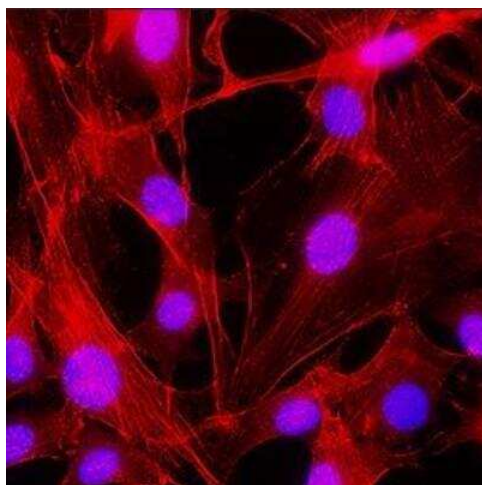


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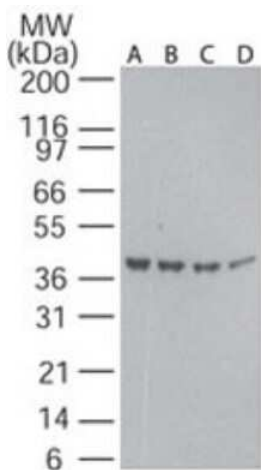
Background:	<p>Actin is a globular protein found in all eukaryotic cells (the only known exception being nematode sperm) where it may be present at concentrations of over 100 uM. It is the monomeric subunit of two types of filaments: microfilaments, one of the three major components of the cytoskeleton, and thin filaments, part of the contractile apparatus in muscle cells. Actin participates in many important cellular processes including muscle contraction, cell signaling, motility and division, cytokinesis, vesicle and organelle movement, and the establishment and maintenance of cell junctions and shape. In vertebrates, three main groups of actin isoforms, alpha, beta, and gamma have been identified. The alpha actins are found in muscle tissues and are a major constituent of the contractile apparatus. The beta and gamma actins co-exist in most cells as components of the cytoskeleton, and as mediators of internal cell motility (Doherty GJ, et al 2008). Among these actins, beta actin, which is expressed constantly, and at high levels, in all the tissue types used in protein research except muscle (skeletal and cardiac). Beta actin acts as a useful loading control in Western blot analysis. Loading controls serve a number of purposes; they ensure the protein of interest has been correctly loaded on the gel, that it is being transferred correctly, and that all reagents are functioning normally. Loading controls can also be used to compare amounts of protein tested (or loaded) per gel lane in western blotting. While very useful when comparing lysates of the same origin (for example transfected and untransfected HEK 293s), comparing lysates from different tissues can be complex. Actin is almost universally expressed, but different tissues express different amounts. In western blotting, an actin antibody titered to the detection limit can show these differences, while an actin antibody used well above the detection limit can show a response that appears equally robust in all samples probed. Therefore caution must be used when using actin or another 'loading control antibody.'</p>
Synonyms:	BRWS1; PS1TP5BP1
Note:	This antibody is not suitable for testing heart or muscle lysate loading.
Protein Families:	ES Cell Differentiation/IPS
Protein Pathways:	Adherens junction, Arrhythmogenic right ventricular cardiomyopathy (ARVC), Dilated cardiomyopathy, Focal adhesion, Hypertrophic cardiomyopathy (HCM), Leukocyte transendothelial migration, Pathogenic Escherichia coli infection, Regulation of actin cytoskeleton, Tight junction, Vibrio cholerae infection, Viral myocarditis

Product images:

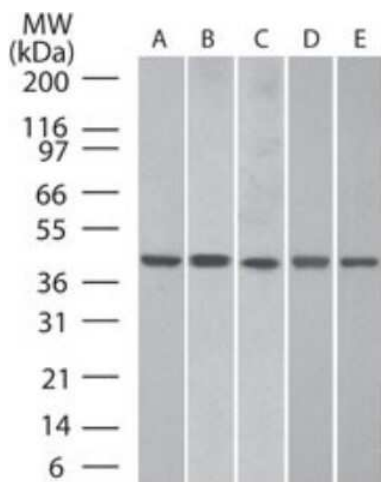
Simple Western: beta-Actin Antibody TA336477 - Image shows a specific band for Beta Actin in 1.0 mg/mL of HeLa lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.



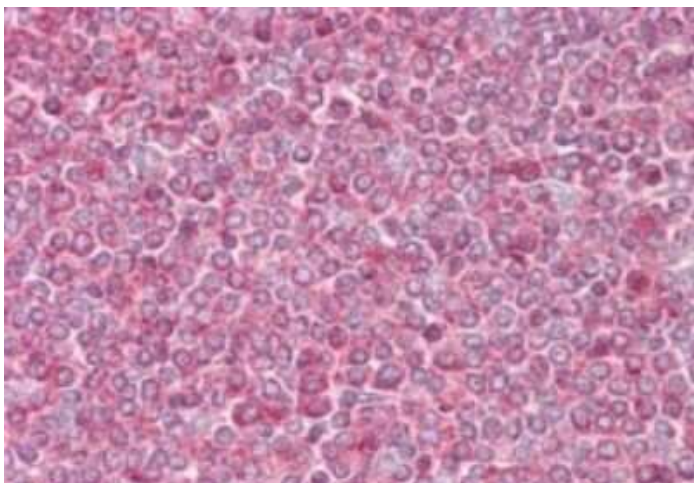
Immunocytochemistry/Immunofluorescence: beta-Actin Antibody TA336477 - Actin was detected in NIH-3T3 cells fixed with methanol using rabbit anti-mouse Actin antibody (TA336477) at 1:100 dilution, overnight at 4C. Cells were stained using Northern Lights 557 conjugated anti-rabbit IgG secondary antibodies (NL004) and counterstained with DAPI.



Western Blot: beta-Actin Antibody TA336477 - Decreasing amounts of human ovary tissue lysate were probed using beta actin antibody at 0.25 ug/mL: A) 40 ug, B) 30 ug, C) 20 ug, D) 10 ug per lane.



Western Blot: beta-Actin Antibody TA336477 - Specific bands are seen in various cell lysates at the same molecular weight. A: human brain, B: mouse brain, C: rat brain, D: human lung, and E: human spleen tissue probed using beta actin antibody at 0.25 ug/mL.



Immunohistochemistry-Paraffin: beta-Actin Antibody TA336477 - Analysis of human spleen using antibody at 10 ug/mL.