

Actin Antibodies and controls

Cat. # ACTB22-A	Rabbit Anti-Actin (Pan, alpha, beta, gamma) IgG, aff pure	SIZE: 100 ug
Cat. # ACTB22-P	Actin (Pan, alpha, beta, gamma) control/blocking peptide	SIZE: 100 ug
Cat. # ACTB12-C	Purified Human Beta-Actin protein control for Western	SIZE: 100 ul

Actin and myosin are the two major cytoskeleton proteins implicated in cellular movement, secretion, phagocytosis, and kinesin. Actin is one of the most conserved cellular protein. At least 6 actin isoforms have been identified by protein sequence analyses. Four actin isoforms represent the differentiation markers of muscle tissues. There are three α -actins: α -skeletal, α -cardiac, and α -smooth muscle), one β -actin (β -non-muscle), and two γ -actins (γ -smooth muscle and γ -non-muscle). Actin isoform are >90% conserved, except in the N-terminal 18-aa (50-60% homology). Beta-actin protein and mRNA levels are often used as a reference for comparing changes in cellular protein/mRNA levels by Western or Northern blots.

Source of Antigen and Antibodies

Antigen	11-aa-MAPS peptide (SGPSIVHRKCF) of actin (1) ; Designated (ACTB22-P or control peptide), Epitope location~ C-terminal,
Ab Host/type	Rabbit, Polyclonal IgG purified over antigen affinity column # ACTB22-A
2-Ab	Goat Anti-rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates also available)
-ve	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

Human beta actin (cat # ACTB16-N) was purified from platelets (>95%, mol wt ~43 kda) and used for control. For Western blot +ve control (**Cat # ACTB12-C**) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of **ACTB12-C** for good visibility with antibody Cat # **ACTB22-a** or other antibodies. Store at -20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the **ACTB12-C** solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable

for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG
100 ug/100ul solution lyophilized powder
Supplied in **Buffer:** PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Storage

Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

Long-term: at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20oC or below.

Recommended Usage

Western Blotting: monoclonal antibodies at :1500-1:2K using Chemiluminescence technique)..

ELISA (1:10-50K; using 50-200 ng control antigen/well).

Specificity & Cross-reactivity

The ACTB24-P is quite conserved in various species: mouse, rat, human, chicken, frog etc actins. The antibody reacts with human, bovine, sheep, goat, pig, rabbit, dog, mouse, rat, g. pig, hamster, chicken, carp, frog, and snail actins. The ACTB24-P control peptide, because of its small size, is not suitable for Western. It should be used in ELISA, dot blot or to neutralize antibody and confirm specificity of antibody. Purified human actin protein (#ACTB12-C) can be used as control for western. Mouse monoclonal antibodies made to the same peptide (ACTB22-P) are also available (Cat# ACTB24-M, ACTB24-Cy, ACTB24-FITC).

References: (1). Ohmuri H (1995) Gene Accession # S38782; Vandekerchove, J et al (1978) Eur. J. Biochem. 90, 451; Lessard J et al (1988) Cell. Motil Cytoskel. 10, 349; North JA et al (1994) J. Cell Sci. 107, 437;

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Purified actin (muscle and non-muscle proteins)
Antibodies to alpha and beta-actins
Antibodies to GAPDH

ACTB22-A-P 71116A