

Product Information

Anti-Actin

produced in rabbit, affinity isolated antibody

Catalog Number **A2066**

Product Description

Anti-Actin is produced in rabbit using C-terminal actin fragment (C11 peptide attached to Multiple Antigen Peptide (MAP) backbone) as immunogen. The sequence is Ser-Gly-Pro-Ser-Ile-Val-His-Arg-Lys-Cys-Phe. Affinity isolated antibody is obtained from rabbit anti-actin antiserum by immunospecific purification which removes essentially all rabbit serum proteins, including immunoglobulins, which do not specifically bind to actin.

Anti-Actin specifically stains typical stress fibers in cultured chicken fibroblasts using indirect immunofluorescent labeling and specifically localizes actin by immunoperoxidase labeling of formalin-fixed, paraffin-embedded human or animal tissue sections following enzymatic unmasking. In immunoblotting, the product localizes actin in many species ranging from human skeletal muscle to amoeba. The product recognizes the 42 kDa actin band using immunoblotting with human or animal tissue extracts.

The antibody is useful for studying actin structure and function, and to probe binding sites of actin-binding proteins.

Actin, a highly conserved protein, is a major component of both the cytoskeletal and contractile structures in all cell types. It varies in amount, being related to the type of differentiation and to the functional state of cells and tissues. Actin can be found in two different forms of aggregation, the globular or the fibrillar state, and at least six distinct isoforms occur in vertebrates. The actins exhibit over 90% sequence homology, but each isoform has a unique NH₂-terminal sequence. The isoforms are comprised of three α actins (skeletal, cardiac, smooth), one β actin (β -non-muscle) and two γ actins (γ smooth muscle and γ non-muscle). Difficulties have been encountered in producing polyclonal antibodies due to the highly conserved nature of actin. Because the amino acid sequence of the C-terminal region is the same for almost all actins,

this antibody has been raised using a synthetic peptide corresponding to the C-terminal 11 residues.

Reagents

Supplied in 0.01 M phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin and 15 mM sodium azide as preservative.

Protein Concentration: 0.4-0.8 mg/ml by absorbance using $E_{280}^{1\%} = 14.0$ (prior to the addition of BSA).

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, the solution may be frozen in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

Product Profile

Indirect immunofluorescence: a working dilution of at least 1:40 was determined using Chicken fibroblasts.

Immunohistochemistry: a working dilution of at least 1:25 was determined using formalin-fixed paraffin embedded human or animal tissue.

Immunoblotting: a working dilution of at least 1:100 was determined using chicken gizzard extract.

Note: In order to obtain best results, it is recommended that each individual user determine their optimum working dilution by titration assay.

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