SANTA CRUZ BIOTECHNOLOGY, INC.

Arp2 (N-15): sc-10125



BACKGROUND BACKGROUND

Actin polymerization is required for a variety of cell functions, including chemotaxis, cell migration, cell adhesion and platelet activation. Cells trigger Actin polymerization through either the *de novo* nucleation of filaments from monomeric Actin, the severing of existing filaments to create uncapped barbed ends, or the uncapping existing barbed ends. The nucleation of Actin is a rate-limiting and unfavorable reaction in Actin polymerization and therefore requires the involvement of the Arp2/3 complex, which helps create new filaments and promotes the end-to-side cross-linking of Actin filaments into the branching meshwork. The Arp2/3 complex consists of the Actin-related proteins Arp2 and Arp3, and various other accessory proteins. The Arp2/3 complex promotes Actin nucleation by binding the pointed end of Actin filaments, or by associating with the side of an existing filament, and nucleates growth in the barbed direction. In addition, the Arp2/3 complex also mediates Actin cytoskeletal outgrowths that are regulated by the Rho family of small GTPases. In response to GTP-binding Cdc42, the Arp2/3 complex binds the Cdc42 substrates, namely the WASP proteins, and initiates the formation of lamellipodia and filopodia.

CHROMOSOMAL LOCATION

Genetic locus: ACTR2 (human) mapping to 2p14; Actr2 (mouse) mapping to 11 A3.1.

SOURCE

Arp2 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Arp2 of human origin.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-10125 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Arp2 (N-15) is recommended for detection of Arp2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Arp2 (N-15) is also recommended for detection of Arp2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Arp2 siRNA (h): sc-29737, Arp2 siRNA (m): sc-29738, Arp2 shRNA Plasmid (h): sc-29737-SH, Arp2 shRNA Plasmid (m): sc-29738-SH, Arp2 shRNA (h) Lentiviral Particles: sc-29737-V and Arp2 shRNA (m) Lentiviral Particles: sc-29738-V.

Molecular Weight of Arp2: 43 kDa.

Positive Controls: C32 whole cell lysate: sc-2205, KNRK whole cell lysate: sc-2214 or RAW 264.7 whole cell lysate: sc-2211.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immuno-histochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA





Arp2 (N-15): sc-10125. Western blot analysis of Arp2 expression in C32 (\pmb{A}) and KNRK (\pmb{B}) whole cell lysates.

Arp2 (N-15): sc-10125. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic and membrane staining of cells in white pulp.

SELECT PRODUCT CITATIONS

 Riol-Blanco, L., et al. 2004. The neuronal protein Kidins220 localizes in a raft compartment at the leading edge of motile immature dendritic cells. Eur. J. Immunol. 34: 108-118.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS Satisfation Guaranteed

Try **Arp2 (E-12): sc-166103** or **Arp2 (E-2): sc-137250**, our highly recommended monoclonal aternatives to Arp2 (N-15).