

p-Adducin α (Ser 436): sc-16734

BACKGROUND

Adducins are a family of cytoskeleton proteins encoded by three genes (α , β and γ). Adducin is a protein associated with the inner leaflet of the plasma membrane and is one of the proteins localized at the spectrin-actin junction of the membrane skeleton. Adducins promote association of spectrin with actin and cap the fast growing end of actin filaments. Adducins contain an N-terminal core, neck and C-terminal tail domains, are substrates for protein kinase A (PKA) and C (PKC) and bind to Ca^{2+} /calmodulin. The major phosphorylation sites common to the adducins are Ser 726 and Ser 713 in the C-terminal MARCKS-related domains of Adducin α and Adducin β , which are phosphorylated by PKA and PKC, respectively. In addition, PKA phosphorylates Adducin α at Ser 408, 436 and 481. Calmodulin-binding is inhibited by phosphorylation of Adducin β , but not Adducin α . Rho-kinase can phosphorylate Adducin α at Thr 445 and Thr 480 downstream of Rho *in vivo*. The phosphorylation of adducin by Rho-kinase plays an important role in the regulation of membrane ruffling and cell motility. In addition, phosphorylation at Ser 726 of Adducin α is required for cleavage by caspase-3.

CHROMOSOMAL LOCATION

Genetic locus: ADD1 (human) mapping to 4p16.3; Add1 (mouse) mapping to 5 B2.

SOURCE

p-Adducin α (Ser 436) is available as either goat (sc-16734) or rabbit (sc-16734-R) affinity purified polyclonal antibody raised against a short amino acid sequence containing Ser 436 phosphorylated Adducin α of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-16734 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-Adducin α (Ser 436) is recommended for detection of Ser 436 phosphorylated Adducin α of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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). p-Adducin α (Ser 436) is also recommended for detection of correspondingly phosphorylated Adducin α in additional species, including equine, canine, bovine, porcine and avian.

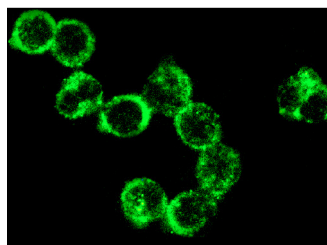
Suitable for use as control antibody for Adducin α siRNA (h): sc-43253, Adducin α siRNA (m): sc-43254, Adducin α shRNA Plasmid (h): sc-43253-SH, Adducin α shRNA Plasmid (m): sc-43254-SH, Adducin α shRNA (h) Lentiviral Particles: sc-43253-V and Adducin α shRNA (m) Lentiviral Particles: sc-43254-V.

Molecular Weight of p-Adducin α : 105 kDa.

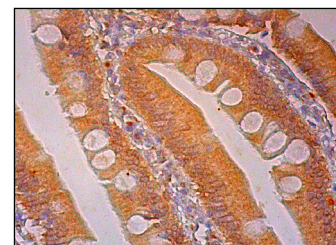
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: for goat primary antibody (sc-16734): 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), for rabbit primary antibody (sc-16734-R): use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunofluorescence: for goat primary antibody (sc-16734): 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, for rabbit primary antibody (sc-16734-R): use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz[™]: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



p-Adducin α (Ser 436): sc-16734. Immunofluorescence staining of methanol-fixed Y79 cells showing membrane localization.



p-Adducin α (Ser 436): sc-16734. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of glandular cells.

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.