

Adducin α (E-17): sc-30549

BACKGROUND

Adducins are a family of cytoskeleton proteins encoded by three genes (α , β , 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. The cortical actin cytoskeletal network is lost during apoptosis and Adducins are central in the cortical actin network organization. Adducin α is a cytoskeletal protein involved with sodium-pump activity in the renal tubule and is associated with hypertension. The expression of Adducin α and Adducin γ is ubiquitous in contrast to the restricted expression of Adducin β . Adducin β is expressed at high levels in brain and hematopoietic tissues, such as bone marrow, in humans, and in spleen in mice.

REFERENCES

1. Chapline, C., Ramsay, K., Klauck, T. and Jaken, S. 1993. Interaction cloning of protein kinase C substrates. *J. Biol. Chem.* 268: 6858-6861.
2. Burns, M.E., Sasaki, T., Takai, Y. and Augustine, G.J. 1998. Rabphilin-3A: a multifunctional regulator of synaptic vesicle traffic. *J. Gen. Physiol.* 111: 243-255.
3. Busjahn, A., Aydin, A., von Treuenfels, N., Faulhaber, H.D., Gohlke, H.R., Knoblauch, H., Schuster, and H., Luft, F.C. 1999. Linkage but lack of association for blood pressure and the α adducin locus in normotensive twins. *J. Hypertens.* 17: 1437-1441.
4. Gilligan, D.M., Lozovatsky, L., Gwynn, B., Brugnara, C., Mohandas, N. and Peters, L.L. 1999. Targeted disruption of the β adducin gene (*Add2*) causes red blood cell spherocytosis in mice. *Proc. Natl. Acad. Sci. USA* 96: 10717-10722.
5. Muro, A.F., Marro, M.L., Gajovic, S., Porro, F., Luzzatto, L. and Baralle, F.E. 2000. Mild spherocytic hereditary elliptocytosis and altered levels of α and γ adducins in β adducin-deficient mice. *Blood* 95: 3978-3985.
6. Psaty, B.M., Doggen, C., Vos, H.L., Vandenbroucke, J.P. and Rosendaal, F.R. 2000. Association of the α adducin polymorphism with blood pressure and risk of myocardial infarction. *J. Hum. Hypertens.* 14: 95-97.
7. van De Water, B., Tijdens, I.B., Verbrugge, A., Huigsloot, M., Dihal, A.A., Stevens, J.L., Jaken, S. and Mulder, G.J. 2000. Cleavage of the Actin-capping protein α adducin at DDS633A by caspase-3 is preceded by its phosphorylation on Serine 726 in cisplatin-induced apoptosis of renal epithelial cells. *J. Biol. Chem.* 275: 25805-25813.

CHROMOSOMAL LOCATION

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

SOURCE

Adducin α (E-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Adducin α of human origin.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-30549 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Adducin α (E-17) is recommended for detection of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Adducin α (E-17) is also recommended for detection of 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 Adducin α : 105 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237, T98G cell lysate: sc-2294 or rat brain extract: sc-2392.

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) 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.

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.



Try **Adducin α (4D1): sc-33633** or **Adducin α (A-5): sc-133079**, our highly recommended monoclonal alternatives to Adducin α (E-17).