SANTA CRUZ BIOTECHNOLOGY, INC.

Adducin α (A-5): sc-133079

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

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. 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 spleen in mice.

REFERENCES

1. Burns, M.E., et al. 1998. Rabphilin-3A: a multifunctional regulator of synaptic vesicle traffic. J. Gen. Physiol. 111: 243-255.
2. Gilligan, D.M., et al. 1999. Targeted disruption of the β Adducin gene (Add2) causes red blood cell spherocytosis in mice. Proc. Natl. Acad. Sci. USA 96: 10717-10722.
3. Busjahn, A., et al. 1999. Linkage but lack of association for blood pressure and the α-Adducin locus in normotensive twins. J. Hypertens. 17: 1437-1441.

CHROMOSOMAL LOCATION

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

SOURCE

Adducin α (A-5) is a mouse monoclonal antibody raised against amino acids 581-680 of Adducin α of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Adducin α (A-5) is recommended for detection of Adducin α of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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.

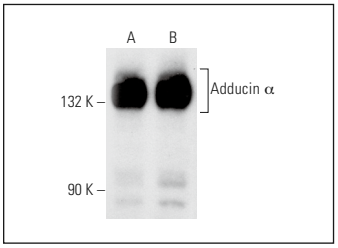
Molecular Weight of Adducin α: 120 kDa.

Positive Controls: H4 cell lysate: sc-2408, T98G cell lysate: sc-2294 or SK-N-MC cell lysate: sc-2237.

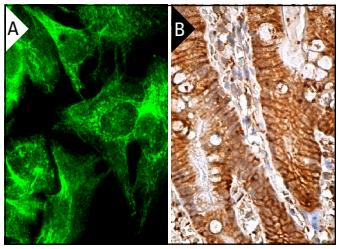
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Adducin α (A-5): sc-133079. Western blot analysis of Adducin α expression in T98G (**A**) and H4 (**B**) whole cell lysates.



Adducin α (A-5): sc-133079. Immunofluorescence staining of formalin-fixed Hep G2 cells showing membrane and cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing membrane and cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Rötzer, V., et al. 2014. Plakoglobin but not desmoplakin regulates keratinocyte cohesion via modulation of p38MAPK signaling. J. Invest. Dermatol. 134: 1655-1664.
2. Joe, S.Y., et al. 2022. Stabilization of F-Actin cytoskeleton by paclitaxel improves the blastocyst developmental competence through P38 MAPK activity in porcine embryos. Biomedicines 10: 1867.
3. Lin, Z., et al. 2023. Cathepsin B S-nitrosylation promotes ADAR1-mediated editing of its own mRNA transcript via an ADD1/MATR3 regulatory axis. Cell Res. 33: 546-561.

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 for detailed protocols and support products.