SANTA CRUZ BIOTECHNOLOGY, INC.

Adducin α (4D1): sc-33633

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 Adducin β 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 Adducin α 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 (4D1) is a mouse monoclonal antibody raised against amino acids 181-245 of recombinant α Adducin of rat origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Adducin α (4D1) is available conjugated to agarose (sc-33633 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-33633 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-33633 PE), fluorescein (sc-33633 FITC), Alexa Fluor® 488 (sc-33633 AF488), Alexa Fluor® 546 (sc-33633 AF546), Alexa Fluor® 594 (sc-33633 AF594) or Alexa Fluor® 647 (sc-33633 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-33633 AF680) or Alexa Fluor® 790 (sc-33633 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

Adducin α (4D1) 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), 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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.

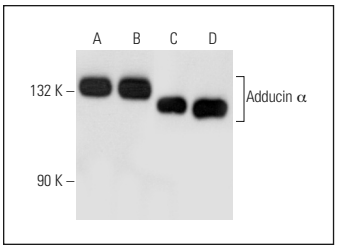
Molecular Weight of Adducin α: 120 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, H4 cell lysate: sc-2408 or T98G cell lysate: sc-2294.

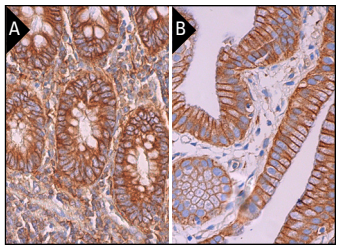
RECOMMENDED SUPPORT REAGENTS

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 (4D1): sc-33633. Western blot analysis of Adducin α expression in T98G (**A**), H4 (**B**), KNRK (**C**) and C6 (**D**) whole cell lysates.



Adducin α (4D1): sc-33633. Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix (**A**) and human gall bladder (**B**) tissue showing membrane and cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Hiermaier, M., et al. 2021. The Actin binding protein α-Adducin modulates desmosomal turnover and plasticity. J. Invest. Dermatol. 141: 1219-1229.e11.

RESEARCH USE

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