

Adducin γ (G-2): sc-365177

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., et al. 1993. Interaction cloning of protein kinase C substrates. *J. Biol. Chem.* 268: 6858-6861.
2. Burns, M.E., et al. 1998. Rabphilin-3A: a multifunctional regulator of synaptic vesicle traffic. *J. Gen. Physiol.* 111: 243-255.
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.
4. 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.

CHROMOSOMAL LOCATION

Genetic locus: ADD3 (human) mapping to 10q25.1; Add3 (mouse) mapping to 19 D2.

SOURCE

Adducin γ (G-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids near the C-terminus of Adducin γ of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Adducin γ (G-2) is available conjugated to agarose (sc-365177 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365177 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365177 PE), fluorescein (sc-365177 FITC), Alexa Fluor[®] 488 (sc-365177 AF488), Alexa Fluor[®] 546 (sc-365177 AF546), Alexa Fluor[®] 594 (sc-365177 AF594) or Alexa Fluor[®] 647 (sc-365177 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-365177 AF680) or Alexa Fluor[®] 790 (sc-365177 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365177 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

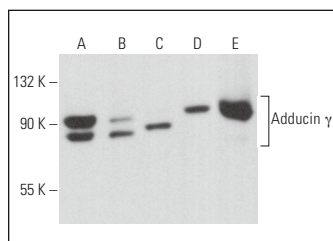
Adducin γ (G-2) is recommended for detection of Adducin γ of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution 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 γ siRNA (h): sc-29640, Adducin γ siRNA (m): sc-29641, Adducin γ shRNA Plasmid (h): sc-29640-SH, Adducin γ shRNA Plasmid (m): sc-29641-SH, Adducin γ shRNA (h) Lentiviral Particles: sc-29640-V and Adducin γ shRNA (m) Lentiviral Particles: sc-29641-V.

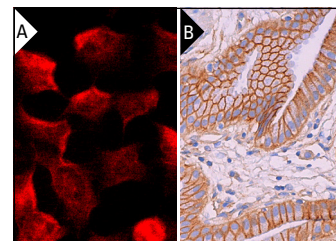
Molecular Weight of Adducin γ : 94 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, RAW 264.7 whole cell lysate: sc-2211 or K-562 whole cell lysate: sc-2203.

DATA



Adducin γ (G-2): sc-365177. Western blot analysis of Adducin γ expression in K-562 (A), Hep G2 (B), RAW 264.7 (C), IB4 (D) and C6 (E) whole cell lysates.



Adducin γ (G-2): sc-365177. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing membrane staining of glandular cells (B).

SELECT PRODUCT CITATIONS

1. Fan, F., et al. 2017. Knockdown of Add3 impairs the myogenic response of renal afferent arterioles and middle cerebral arteries. *Am. J. Physiol. Renal Physiol.* 312: F971-F981.
2. Fan, L., et al. 2020. Impaired renal hemodynamics and glomerular hyperfiltration contribute to hypertension-induced renal injury. *Am. J. Physiol. Renal Physiol.* 319: F624-F635.
3. Gao, W., et al. 2021. Role of γ -Adducin in Actin cytoskeleton rearrangements in podocyte pathophysiology. *Am. J. Physiol. Renal Physiol.* 320: F97-F113.

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.