

# Adducin $\gamma$ (D-11): sc-365178

## BACKGROUND

Adducins are a family of cytoskeleton proteins encoded by three genes ( $\alpha$ ,  $\beta$ ,  $\gamma$ ). 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  $\alpha$  is a cytoskeletal protein involved with sodium-pump activity in the renal tubule and is associated with hypertension. The expression of Adducin  $\alpha$  and Adducin  $\gamma$  is ubiquitous in contrast to the restricted expression of Adducin  $\beta$ . Adducin  $\beta$  is expressed at high levels in brain and hematopoietic tissues, such as bone marrow in humans, and in spleen in mice.

## REFERENCES

- Chapline, C., et al. 1993. Interaction cloning of protein kinase C substrates. *J. Biol. Chem.* 268: 6858-6861.
- Burns, M.E., et al. 1998. Rabphilin-3A: a multifunctional regulator of synaptic vesicle traffic. *J. Gen. Physiol.* 111: 243-255.
- Busjahn, A., et al. 1999. Linkage but lack of association for blood pressure and the  $\alpha$ -Adducin locus in normotensive twins. *J. Hypertens.* 17: 1437-1441.
- Gilligan, D.M., et al. 1999. Targeted disruption of the  $\beta$  Adducin gene (Add2) causes red blood cell spherocytosis in mice. *Proc. Natl. Acad. Sci. USA* 96: 10717-10722.
- Muro, A.F., et al. 2000. Mild spherocytic hereditary elliptocytosis and altered levels of  $\alpha$  and  $\gamma$  Adducins in  $\beta$  Adducin-deficient mice. *Blood* 95: 3978-3985.
- Psaty, B.M., et al. 2000. Association of the  $\alpha$ -Adducin polymorphism with blood pressure and risk of myocardial infarction. *J. Hum. Hypertens.* 14: 95-97.

## CHROMOSOMAL LOCATION

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

## SOURCE

Adducin  $\gamma$  (D-11) is a mouse monoclonal antibody raised against a peptide mapping near the C-terminus of Adducin  $\gamma$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>3</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-365178 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## STORAGE

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

## APPLICATIONS

Adducin  $\gamma$  (D-11) is recommended for detection of Adducin  $\gamma$  of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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).

Suitable for use as control antibody for Adducin  $\gamma$  siRNA (h): sc-29640, Adducin  $\gamma$  siRNA (m): sc-29641, Adducin  $\gamma$  shRNA Plasmid (h): sc-29640-SH, Adducin  $\gamma$  shRNA Plasmid (m): sc-29641-SH, Adducin  $\gamma$  shRNA (h) Lentiviral Particles: sc-29640-V and Adducin  $\gamma$  shRNA (m) Lentiviral Particles: sc-29641-V.

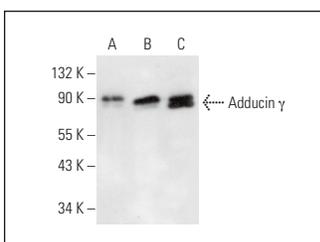
Molecular Weight of Adducin  $\gamma$ : 94 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, F9 cell lysate: sc-2245 or K-562 whole cell lysate: sc-2203.

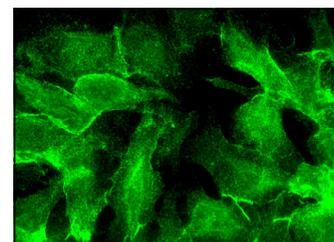
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



Adducin  $\gamma$  (D-11): sc-365178. Western blot analysis of Adducin  $\gamma$  expression in F9 (A), HeLa (B) and K-562 (C) whole cell lysates.



Adducin  $\gamma$  (D-11): sc-365178. Immunofluorescence staining of formalin-fixed Hep G2 cells showing membrane localization.

## SELECT PRODUCT CITATIONS

- Spindler, V., et al. 2014. Plakoglobin but not desmoplakin regulates keratinocyte cohesion via modulation of p38MAPK signaling. *J. Invest. Dermatol.* 134: 1655-1664.
- Kugelmann, D., et al. 2015. Adducin is involved in endothelial barrier stabilization. *PLoS ONE* 10: e0126213.

## RESEARCH USE

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