

Centaurin γ 3 (A-10): sc-393553

BACKGROUND

ADP-ribosylation factor (ARF) family of small GTP-binding proteins are involved in vesicular transport regulation and in controlling cytoskeletal organization and cell adhesion. These proteins are best characterized as regulators of membrane traffic. The Centaurin GTPase-activating protein family comprise a subset of ARF regulatory molecules that transduce PI 3-kinase activation into coordinated control of Arf-dependent pathways. This family includes ASAP1, ACAP1, ACAP2, AGAP1, ARAP1, ARAP2, Centaurin α 1 and Centaurin γ 3. The Centaurin α 1 protein is a high affinity PtdIns(3,4,5)P₃ binding protein enriched in brain. By acting as a GTPase activating protein for ADP ribosylation factor 6 (ARF6), Centaurin α 1 is able to switch off ARF6 and inhibit its ability to mediate β ₂-adrenoceptor internalization and negatively regulate ARF6 activity by functioning as an *in vivo* PIP3 dependent ARF6 GAP.

REFERENCES

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- Venkateswarlu, K., et al. 2004. Centaurin α 1 is an *in vivo* phosphatidylinositol 3,4,5-trisphosphate-dependent GTPase-activating protein for ARF6 that is involved in Actin cytoskeleton organization. *J. Biol. Chem.* 279: 6205-6208.
- Venkateswarlu, K., et al. 2005. Centaurin α 1 interacts directly with kinesin motor protein KIF13B. *J. Cell Sci.* 118: 2471-2484.
- Kanamarlapudi, V. 2005. Centaurin α 1 and KIF13B kinesin motor protein interaction in ARF6 signalling. *Biochem. Soc. Trans.* 33: 1279-1281.
- Lawrence, J., et al. 2005. Centaurin α 1, an ADP-ribosylation factor 6 GTPase activating protein, inhibits β ₂-adrenoceptor internalization. *Mol. Pharmacol.* 67: 1822-1828.
- Hayashi, H., et al. 2006. Centaurin α 1 is a phosphatidylinositol 3-kinase-dependent ac ERK1/2 mitogen-activated protein kinases. *J. Biol. Chem.* 281: 1332-1337.

CHROMOSOMAL LOCATION

Genetic locus: AGAP3 (human) mapping to 7q36.1; Agap3 (mouse) mapping to 5 A3.

SOURCE

Centaurin γ 3 (A-10) is a mouse monoclonal antibody raised against amino acids 826-875 mapping at the C-terminus of Centaurin γ 3 of human origin.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

Centaurin γ 3 (A-10) is recommended for detection of Centaurin γ 3 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Centaurin γ 3 siRNA (h): sc-60355, Centaurin γ 3 siRNA (m): sc-60356, Centaurin γ 3 shRNA Plasmid (h): sc-60355-SH, Centaurin γ 3 shRNA Plasmid (m): sc-60356-SH, Centaurin γ 3 shRNA (h) Lentiviral Particles: sc-60355-V and Centaurin γ 3 shRNA (m) Lentiviral Particles: sc-60356-V.

Molecular Weight of Centaurin γ 3 variant 1: 95 kDa.

Molecular Weight of Centaurin γ 3 variant 2: 95 kDa.

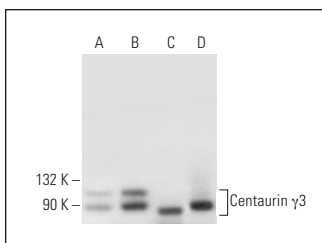
Molecular Weight of Centaurin γ 3 variant 3: 40 kDa.

Positive Controls: mouse brain extract: sc-2253, human heart extract: sc-363763 or T98G cell lysate: sc-2294.

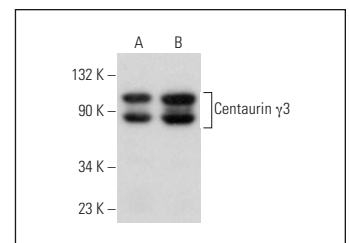
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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 κ BP-FITC: sc-516140 or m-IgG κ 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



Centaurin γ 3 (A-10): sc-393553. Western blot analysis of Centaurin γ 3 expression in HeLa (A) and T98G (B) whole cell lysates and human heart (C) and mouse brain (D) tissue extracts.



Centaurin γ 3 (A-10): sc-393553. Western blot analysis of Centaurin γ 3 expression in U-87 MG (A) and MDA-MB-435 (B) whole cell lysates.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.