

Centaurin γ 3 (C-17): sc-47830

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

- Hawadle, M.A., Folarin, N., Martin, R. and Jackson, T.R. 2002. Cytohesins and centaurins control subcellular trafficking of macromolecular signaling complexes: regulation by phosphoinositides and ADP-ribosylation factors. *Biol. Res.* 35: 247-265.
- Thacker, E., Kearns, B., Chapman, C., Hammond J., Howell, A. and Theibert, A. 2004. The ARF6 GAP Centaurin α 1 is a neuronal Actin-binding protein which also functions via GAP-independent activity to regulate the Actin cytoskeleton. *Eur. J. Cell Biol.* 83: 541-554.
- Venkateswarlu, K., Brandom, K.G. and Lawrence, J.L. 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., Hanada, T. and Chishti, A.H. 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.

CHROMOSOMAL LOCATION

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

SOURCE

Centaurin γ 3 (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Centaurin γ 3 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-47830 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Centaurin γ 3 (C-17) is recommended for detection of Centaurin γ 3 of mouse and human origin by Western Blotting (starting dilution 1:200, 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).

Centaurin γ 3 (C-17) is also recommended for detection of Centaurin γ 3 in additional species, including equine, bovine and porcine.

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 1/2: 95 kDa.

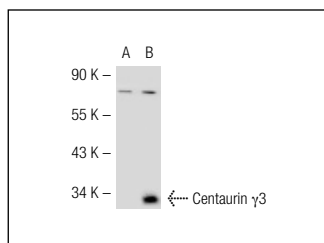
Molecular Weight of Centaurin γ 3 variant 3: 40 kDa.

Positive Controls: Centaurin γ 3 (m): 293T Lysate: sc-119171 or HeLa whole cell lysate: sc-2200.

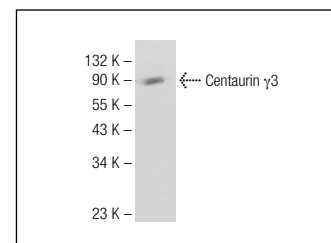
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotting A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Centaurin γ 3 (C-17): sc-47830. Western blot analysis of Centaurin γ 3 expression in non-transfected: sc-117752 (A) and mouse Centaurin γ 3 transfected: sc-119171 (B) 293T whole cell lysates.



Centaurin γ 3 (C-17): sc-47830. Western blot analysis of Centaurin γ 3 expression in HeLa whole cell lysate.

RESEARCH USE

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