

Centaurin α 2 (M-19): sc-55359

BACKGROUND

The ADP-ribosylation factor (ARF) family of small GTP-binding proteins are involved in vesicular transport regulation and in controlling cytoskeletal organization and cell adhesion. 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, Centaurin γ 3 and the recently discovered Centaurin α 2. Expressed in a wide variety of tissues such as fat, heart and skeletal muscle, Centaurin α 2 is thought to negatively regulate ARF-mediated Actin rearrangement by binding activated PI 3-kinase. Although the exact function of Centaurin α 2 is not yet known, its high sequence similarity with Centaurin α 1 suggests that it may also act as an ARF6 GTPase.

REFERENCES

1. Dubois, T., et al. 2001. Casein kinase I associates with members of the Centaurin- α family of phosphatidylinositol 3,4,5-trisphosphate-binding proteins. *J. Biol. Chem.* 276: 18757-18764.
2. Whitley, P., et al. 2002. Identification of Centaurin- α 2: a phosphatidylinositol-binding protein present in fat, heart and skeletal muscle. *Eur. J. Cell Biol.* 81: 222-230.
3. Hawadle, M.A., et al. 2002. Cytohesins and centaurins control subcellular trafficking of macromolecular signaling complexes: regulation by phosphoinositides and ADP-ribosylation factors. *Biol. Res.* 35: 247-265.
4. Hanck, T., et al. 2003. Identification of gene structure and subcellular localization of human Centaurin α 2, and p42IP4, a family of two highly homologous, Ins 1,3,4,5-P4-/PtdIns 3,4,5-P3-binding, adapter proteins. *J. Neurochem.* 88: 326-336.
5. Thacker, E., et al. 2005. 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.
6. Venturin, M., et al. 2005. Evidence by expression analysis of candidate genes for congenital heart defects in the NF1 microdeletion interval. *Ann. Hum. Genet.* 69: 508-516.
7. Venkateswarlu, K., et al. 2007. PI 3-kinase-dependent membrane recruitment of Centaurin- α 2 is essential for its effect on ARF6-mediated Actin cytoskeleton reorganisation. *J. Cell Sci.* 120: 792-801.

CHROMOSOMAL LOCATION

Genetic locus: Centa2 (mouse) mapping to 11 B5.

SOURCE

Centaurin α 2 (M-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Centaurin α 2 of mouse origin.

STORAGE

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

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-55359 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Centaurin α 2 (M-19) is recommended for detection of Centaurin α 2 of mouse 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).

Suitable for use as control antibody for Centaurin α 2 siRNA (m): sc-62093; and as shRNA Plasmid control antibody for Centaurin α 2 shRNA Plasmid (m): sc-62093-SH.

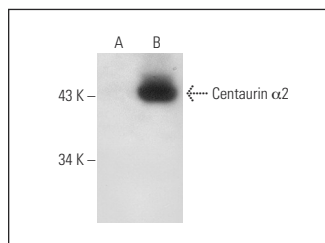
Molecular Weight of Centaurin α 2: 44 kDa.

Positive Controls: Centaurin α 2 (m): 293T Lysate: sc-125126.

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 Blotto 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 α 2 (M-19): sc-55359. Western blot analysis of Centaurin α 2 expression in non-transfected: sc-117752 (A) and mouse Centaurin α 2 transfected: sc-125126 (B) 293T whole cell lysates.

RESEARCH USE

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