SANTA CRUZ BIOTECHNOLOGY, INC.

Centaurin α2 (F-4): sc-514510

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 α1, Centaurin γ3 and the recently discovered Centaurin α2. Expressed in a wide variety of tissues such as fat, heart and skeletal muscle, Centaurin α2 is thought to negatively regulate ARF-mediated Actin rearrangement by binding activated PI 3-kinase. Although the exact function of Centaurin α2 is not yet known, its high sequence similarity with Centaurin α1 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-α2: a phosphatidylinositide-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 α2, 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.

CHROMOSOMAL LOCATION

Genetic locus: ADAP2 (human) mapping to 17q11.2.

SOURCE

Centaurin α2 (F-4) is a mouse monoclonal antibody raised against amino acids 271-381 mapping at the C-terminus of Centaurin α2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Centaurin α2 (F-4) is available conjugated to agarose (sc-514510 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514510 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514510 PE), fluorescein (sc-514510 FITC), Alexa Fluor® 488 (sc-514510 AF488), Alexa Fluor® 546 (sc-514510 AF546), Alexa Fluor® 594 (sc-514510 AF594) or Alexa Fluor® 647 (sc-514510 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514510 AF680) or Alexa Fluor® 790 (sc-514510 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Centaurin α2 (F-4) is recommended for detection of Centaurin α2 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 α2 siRNA (h): sc-62092, Centaurin α2 shRNA Plasmid (h): sc-62092-SH and Centaurin α2 shRNA (h) Lentiviral Particles: sc-62092-V.

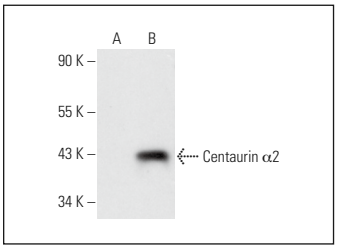
Molecular Weight of Centaurin α2: 44 kDa.

Positive Controls: Centaurin α2 (h): 293T Lysate: sc-115111.

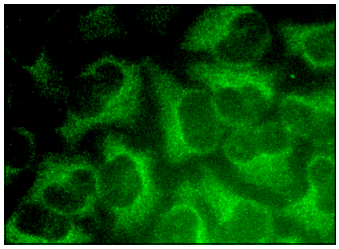
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 α2 (F-4): sc-514510. Western blot analysis of Centaurin α2 expression in non-transfected: sc-117752 (**A**) and human Centaurin α2 transfected: sc-115111 (**B**) 293T whole cell lysates.



Centaurin α2 (F-4): sc-514510. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

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.

PROTOCOLS

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

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