SANTA CRUZ BIOTECHNOLOGY, INC.

Centaurin γ3 (E-8): sc-271793

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 α1 and Centaurin γ3. The Centaurin α1 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 α1 is able to switch off ARF6 and inhibit its ability to mediate β2-adrenoceptor internalization and negatively regulate ARF6 activity by functioning as an *in vivo* PIP3 dependent ARF6 GAP.

REFERENCES

1. 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.
2. Thacker, E., et al. 2004. The ARF6 GAP Centaurin α1 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.
3. Venkateswarlu, K., et al. 2004. Centaurin α1 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.

CHROMOSOMAL LOCATION

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

SOURCE

Centaurin γ3 (E-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 849-874 at the C-terminus of Centaurin γ3 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 γ3 (E-8) is available conjugated to agarose (sc-271793 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-271793 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271793 PE), fluorescein (sc-271793 FITC), Alexa Fluor® 488 (sc-271793 AF488), Alexa Fluor® 546 (sc-271793 AF546), Alexa Fluor® 594 (sc-271793 AF594) or Alexa Fluor® 647 (sc-271793 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271793 AF680) or Alexa Fluor® 790 (sc-271793 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271793 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Centaurin γ3 (E-8) is recommended for detection of Centaurin γ3 of mouse, rat and 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 γ3 siRNA (h): sc-60355, Centaurin γ3 siRNA (m): sc-60356, Centaurin γ3 shRNA Plasmid (h): sc-60355-SH, Centaurin γ3 shRNA Plasmid (m): sc-60356-SH, Centaurin γ3 shRNA (h) Lentiviral Particles: sc-60355-V and Centaurin γ3 shRNA (m) Lentiviral Particles: sc-60356-V.

Molecular Weight of Centaurin γ3 variants 1/2: 95 kDa.

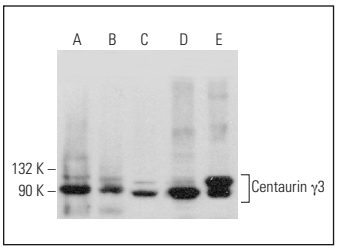
Molecular Weight of Centaurin γ3 variant 3: 40 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, SH-SY5Y cell lysate: sc-3812 or rat brain extract: sc-2392.

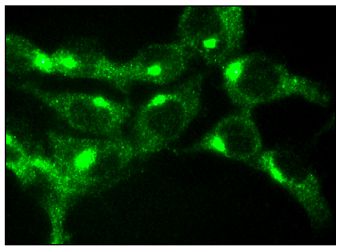
RECOMMENDED SUPPORT REAGENTS

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 γ3 (E-8): sc-271793. Western blot analysis of Centaurin γ3 expression in rat brain (**A**) and mouse postnatal brain (**B**) tissue extracts and EOC 20 (**C**), SH-SY5Y (**D**) and IMR-32 (**E**) whole cell lysates.



Centaurin γ3 (E-8): sc-271793. Immunofluorescence staining of methanol-fixed NIH/3T3 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.

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