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# Centaurin γ3 (m): 293T Lysate: sc-119171

## 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 $β_2$-adrenoceptor internalization and negatively regulate ARF6 activity by functioning as an *in vivo* PIP3 dependent ARF6 GAP.

## REFERENCES

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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., Brandom, K.G. and Lawrence, J.L. 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.

4. Venkateswarlu, K., et al. 2005. Centaurin α1 interacts directly with kinesin motor protein KIF13B. J. Cell Sci. 118: 2471-2484.

5. Kanamarlapudi, V. 2005. Centaurin α1 and KIF13B kinesin motor protein interaction in ARF6 signalling. Biochem. Soc. Transact. 33: 1279-1281.

6. Lawrence, J., et al. 2005. Centaurin α1, an ADP-ribosylation factor 6 GTPase activating protein, inhibits $β_2$-adrenoceptor internalization. Mol. Pharmacol. 67: 1822-1828.

7. Hayashi, H., et al. 2006. Centaurin α1 is a phosphatidylinositol 3-kinase-dependent ac ERK1/2 mitogen-activated protein kinases. J. Biol. Chem. 281: 1332-1337.

## CHROMOSOMAL LOCATION

Genetic locus: Agap3 (mouse) mapping to 5 A3.

## PRODUCT

Centaurin γ3 (m): 293T Lysate represents a lysate of mouse Centaurin γ3 transfected 293T cells and is provided as 100 μg protein in 200 μl SDS-PAGE buffer.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## APPLICATIONS

Centaurin γ3 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Centaurin γ3 antibodies. Recommended use: 10-20 μl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

## 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.