

RIC-8A (C-3): sc-398962

BACKGROUND

The Ras superfamily of GTPases can be subdivided into the Ras, Rho/Rac, Sar, Rab, Arf, Rap and Ran subfamilies, all of which control multiple aspects of cell function, including cytoskeletal rearrangement, nuclear signaling and cell growth. The Ras superfamily of GTPases function as regulated switches that toggle between a biologically active GTP-bound and an inactive GDP-bound form. This activation is catalyzed by guanine nucleotide exchange factors (GEFs). RIC-8A (resistance to inhibitors of cholinesterase 8 homolog A), also known as RIC8 or Synembryn-A, is a 530 amino acid cytoplasmic protein that can activate several G_{α} proteins, including $G_{\alpha i-1}$, $G_{\alpha q}$ and $G_{\alpha o}$. Functioning as a guanine nucleotide exchange factor, RIC-8A binds to GDP-associated substrates and exchanges bound GDP for free GTP. Via its ability to stimulate protein function, RIC-8A plays a role in regulating mitotic movement and may be involved in receptor-mediated ERK activation. RIC-8A is expressed as three isoforms due to alternative splicing events.

REFERENCES

1. Miller, K.G., et al. 2000. RIC-8 (synembryn): a novel conserved protein that is required for $G_{\alpha q}$ signaling in the *C. elegans* nervous system. *Neuron* 27: 289-299.
2. Tall, G.G., et al. 2003. Mammalian RIC-8A (synembryn) is a heterotrimeric G_{α} protein guanine nucleotide exchange factor. *J. Biol. Chem.* 278: 8356-8362.
3. Klattenhoff, C., et al. 2003. Human brain synembryn interacts with $G_{s\alpha}$ and $G_{q\alpha}$ and is translocated to the plasma membrane in response to isoproterenol and carbachol. *J. Cell. Physiol.* 195: 151-157.
4. Malik, S., et al. 2005. RIC-8 enhances G protein $\beta\gamma$ -dependent signaling in response to $\beta\gamma$ -binding peptides in intact cells. *Mol. Pharmacol.* 68: 129-136.

CHROMOSOMAL LOCATION

Genetic locus: RIC8A (human) mapping to 11p15.5; Ric8a (mouse) mapping to 7 F5.

SOURCE

RIC-8A (C-3) is a mouse monoclonal antibody raised against amino acids 172-270 mapping within an internal region of RIC-8A of human origin.

PRODUCT

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

RIC-8A (C-3) is available conjugated to agarose (sc-398962 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398962 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398962 PE), fluorescein (sc-398962 FITC), Alexa Fluor® 488 (sc-398962 AF488), Alexa Fluor® 546 (sc-398962 AF546), Alexa Fluor® 594 (sc-398962 AF594) or Alexa Fluor® 647 (sc-398962 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398962 AF680) or Alexa Fluor® 790 (sc-398962 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

RIC-8A (C-3) is recommended for detection of RIC-8A of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 RIC-8A siRNA (h): sc-76402, RIC-8A siRNA (m): sc-76403, RIC-8A shRNA Plasmid (h): sc-76402-SH, RIC-8A shRNA Plasmid (m): sc-76403-SH, RIC-8A shRNA (h) Lentiviral Particles: sc-76402-V and RIC-8A shRNA (m) Lentiviral Particles: sc-76403-V.

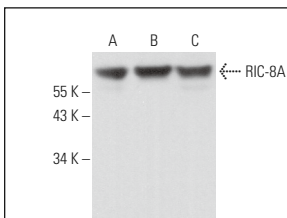
Molecular Weight of RIC-8A: 60 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or THP-1 cell lysate: sc-2238.

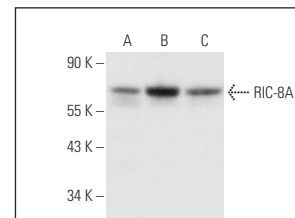
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



RIC-8A (C-3): sc-398962. Western blot analysis of RIC-8A expression in HeLa (A), SJRH30 (B) and HEL 92.1.7 (C) whole cell lysates.



RIC-8A (C-3): sc-398962. Western blot analysis of RIC-8A expression in HeLa (A), K-562 (B) and THP-1 (C) whole cell lysates.

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.