

## RIC-3 (H-282): sc-134787

### BACKGROUND

RIC-3 (resistant to inhibitors of cholinesterase-3) is the mammalian homolog of the RIC-3 protein from *C. elegans*. It contains two transmembrane domains and a coiled-coil domain. RIC-3 is expressed in neurons and localizes to the endoplasmic reticulum, where it plays a role in receptor folding and subunit assembly. In particular, RIC-3 is a nicotinic acetylcholine receptor (nAChR)-associated protein and it significantly enhances the subunit assembly, proper folding, stability and surface expression of several heteromeric and homomeric nAChR subtypes as well as some 5-HT<sub>3</sub> receptors. This suggests that RIC-3 may be an important regulator of receptor expression. Several isoforms exist for RIC-3 and they exhibit overlapping but distinct localizations. In addition, these isoforms may have various affects on receptor expression.

### REFERENCES

- Halevi, S., et al. 2003. Conservation within the RIC-3 gene family. Effectors of mammalian nicotinic acetylcholine receptor expression. *J. Biol. Chem.* 278: 34411-34417.
- Williams, M.E., et al. 2005. RIC-3 promotes functional expression of the nicotinic acetylcholine receptor  $\alpha 7$  subunit in mammalian cells. *J. Biol. Chem.* 280: 1257-1263.
- Cheng, A., et al. 2005. Cell surface expression of 5-hydroxytryptamine type 3 receptors is promoted by RIC-3. *J. Biol. Chem.* 280: 22502-22507.
- Castillo, M., et al. 2005. Dual role of the RIC-3 protein in trafficking of serotonin and nicotinic acetylcholine receptors. *J. Biol. Chem.* 280: 27062-27068.
- Ben-Ami, H.C., et al. 2005. RIC-3 affects properties and quantity of nicotinic acetylcholine receptors via a mechanism that does not require the coiled-coil domains. *J. Biol. Chem.* 280: 28053-28060.

### CHROMOSOMAL LOCATION

Genetic locus: RIC3 (human) mapping to 11p15.4; Ric3 (mouse) mapping to 7 E3.

### SOURCE

RIC-3 (H-282) is a rabbit polyclonal antibody raised against amino acids 88-369 mapping at the C-terminus of RIC-3 of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

### STORAGE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

### APPLICATIONS

RIC-3 (H-282) is recommended for detection of RIC-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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-3 siRNA (h): sc-72301, RIC-3 siRNA (m): sc-72302, RIC-3 shRNA Plasmid (h): sc-72301-SH, RIC-3 shRNA Plasmid (m): sc-72302-SH, RIC-3 shRNA (h) Lentiviral Particles: sc-72301-V and RIC-3 shRNA (m) Lentiviral Particles: sc-72302-V.

Molecular Weight of RIC-3: 55 kDa.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### SELECT PRODUCT CITATIONS

- Koperniak, T.M., et al. 2013. Cell-specific effects on surface  $\alpha 7$  nicotinic receptor expression revealed by over-expression and knockdown of rat RIC3 protein. *J. Neurochem.* 124: 300-309.

### RESEARCH USE

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



Try **RIC-3 (G-8): sc-377408**, our highly recommended monoclonal alternative to RIC-3 (H-282).