

# Renin Receptor (H-85): sc-67390

## BACKGROUND

The Renin Receptor, also known as ATP6AP2 (ATPase H<sup>+</sup>-transporting lysosomal accessory protein 2), ATP6IP2 (ATPase H<sup>+</sup>-transporting lysosomal-interacting protein 2), CAPER or M8-9, is an ATPase-associated protein that functions as a Renin and prorenin cellular receptor. Expressed in the brain, heart, liver, kidney, placenta and pancreas, the Renin Receptor functions to activate ERK 1 and ERK 2, thereby mediating Renin-dependent cellular responses. The Renin Receptor has a subunit that associates with the transmembrane domain of V-type ATPases and interacts with Renin. These interactions increase the catalytic activity of Renin in the Renin-Angiotensin system (RAS), thus upregulating the conversion of angiotensinogen to Angiotensin. Defects in the gene encoding the Renin Receptor are implicated in mental retardation X-linked with epilepsy (MRXE), a syndromic mental retardation characterized by epilepsy as well as delays in motor milestones and speech acquisition in infancy.

## REFERENCES

1. Nguyen, G., et al. 2002. Pivotal role of the Renin/prorenin receptor in Angiotensin II production and cellular responses to Renin. *J. Clin. Invest.* 109: 1417-1427.
2. Nguyen, G., et al. 2004. Renin/prorenin-receptor biochemistry and functional significance. *Curr. Hypertens. Rep.* 6: 129-132.
3. Ramser, J., et al. 2005. A unique exonic splice enhancer mutation in a family with X-linked mental retardation and epilepsy points to a novel role of the Renin Receptor. *Hum. Mol. Genet.* 14: 1019-1027.
4. Catanzaro, D.F. 2005. Physiological relevance of Renin/prorenin binding and uptake. *Hypertens. Res.* 28: 97-105.

## CHROMOSOMAL LOCATION

Genetic locus: ATP6AP2 (human) mapping to Xp11.4; Atp6ap2 (mouse) mapping to X A1.1.

## SOURCE

Renin Receptor (H-85) is a rabbit polyclonal antibody raised against amino acids 41-125 mapping within an extracellular domain of Renin Receptor of human origin.

## PRODUCT

Each vial contains 200 µg 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.

## RESEARCH USE

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

## PROTOCOLS

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

## APPLICATIONS

Renin Receptor (H-85) is recommended for detection of Renin Receptor of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

Renin Receptor (H-85) is also recommended for detection of Renin Receptor in additional species, including equine, canine, bovine and porcine.

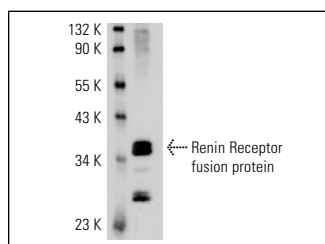
Suitable for use as control antibody for Renin Receptor siRNA (h): sc-62934, Renin Receptor siRNA (m): sc-62935, Renin Receptor shRNA Plasmid (h): sc-62934-SH, Renin Receptor shRNA Plasmid (m): sc-62935-SH, Renin Receptor shRNA (h) Lentiviral Particles: sc-62934-V and Renin Receptor shRNA (m) Lentiviral Particles: sc-62935-V.

Molecular Weight of Renin Receptor: 39 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.

## DATA



Renin Receptor (H-85): sc-67390. Western blot analysis of human recombinant Renin Receptor fusion protein.

## SELECT PRODUCT CITATIONS

1. Montes, E., et al. 2012. Renin is an angiotensin-independent profibrotic mediator: role in pulmonary fibrosis. *Eur. Respir. J.* 39: 141-148.
2. Lee, K.C., et al. 2012. Aliskiren attenuates chronic carbon tetrachloride-induced liver injury in mice. *Eur. J. Clin. Invest.* 42: 1261-1271.
3. EauClaire, S.F., et al. 2012. Mutations in vacuolar H<sup>+</sup>-ATPase subunits lead to biliary developmental defects in zebrafish. *Dev. Biol.* 365: 434-444.