

RSC1A1 (C-18): sc-162127

BACKGROUND

RSC1A1 (regulatory solute carrier protein, family 1, member 1), also known as RS1, is 617 amino acid nuclear protein that localizes to the inner side of the plasma membrane and the Golgi apparatus. Expressed in small intestine, kidney and brain, RSC1A1 mediates transcriptional and post-transcriptional regulation of Na⁺-D-glucose cotransporter SGLT-1 (sodium/glucose cotransporter 1). RSC1A1 is thought to inhibit the dynamin-dependent release of SGLT-1-containing vesicles from the TGN (trans-Golgi network). Mutations in the gene encoding RSC1A1 may lead to leptin-independent up-regulation of food intake, which is suggested to be partially responsible for obesity. The gene encoding is RSC1A1 located on human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome.

REFERENCES

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- Kroiss, M., et al. 2006. Transporter regulator RS1 (RSC1A1) coats the trans-Golgi network and migrates into the nucleus. *Am. J. Physiol. Renal Physiol.* 291: F1201-F1212.
- Vernaleken, A., et al. 2007. Tripeptides of RS1 (RSC1A1) inhibit a monosaccharide-dependent exocytotic pathway of Na⁺-D-glucose cotransporter SGLT1 with high affinity. *J. Biol. Chem.* 282: 28501-28513.

CHROMOSOMAL LOCATION

Genetic locus: RSC1A1 (human) mapping to 1p36.21.

SOURCE

RSC1A1 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of RSC1A1 of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-162127 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RSC1A1 (C-18) is recommended for detection of RSC1A1 of 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).

Suitable for use as control antibody for RSC1A1 siRNA (h): sc-88001, RSC1A1 shRNA Plasmid (h): sc-88001-SH and RSC1A1 shRNA (h) Lentiviral Particles: sc-88001-V.

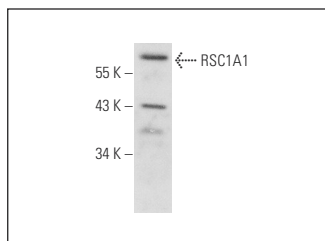
Molecular Weight of RSC1A1: 67 kDa.

Positive Controls: HEK293 whole cell lysate: sc-45136.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

DATA



RSC1A1 (C-18): sc-162127. Western blot analysis of RSC1A1 expression in HEK293 whole cell lysate.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.