

SorCS1 (M-120): sc-67093

BACKGROUND

There are three SorCS genes that have diverse, partially overlapping functions in the central nervous system. In the developing and mature central nervous system, the homologous SorCS1 and SorCS2 genes and the SorCS3 gene are expressed in a combinatorial, non-overlapping pattern. SorCS proteins show homology to the mosaic receptor SorLA and the neurotensin receptor sortilin, based on a common VPS10 domain, which is the hallmark of the SorCS receptor family. SorCS1 is a type 1 receptor containing a VPS10P domain and a leucine-rich domain. Alternative splicing of human SorCS1 results in four isoforms with different cytoplasmic tails and differential expression in tissues. Human SorCS1 is detected in fetal and infant brain and in fetal retina. Alternative splicing of murine SorCS1 also results in four isoforms. Murine isoform 1 is highly expressed in brain and at lower levels in heart, liver and kidney. It is detected in newborn mouse brain and in adult olfactory bulb and cerebral cortex. Murine isoform 2 is highly expressed in liver and at lower levels in heart, brain, kidney and testis.

REFERENCES

1. Hermeijer, G., et al. 1999. Identification and characterization of SorCS, a third member of a novel receptor family. *Biochem. J.* 266: 347-351.
2. Hermeijer, G., et al. 2001. SorCS1, a member of the novel sorting receptor family, is localized in somata and dendrites of neurons throughout the murine brain. *Neurosci.* 313: 83-87.
3. Hampe, W., et al. 2001. The genes for the human VPS10 domain-containing receptors are large and contain many small exons. *Hum. Genet.* 108: 529-536.
4. Hermeijer, G., et al. 2001. Transient expression of SorCS in developing telencephalic and mesencephalic structures of the mouse. *Neuroreport* 12: 29-32.
5. Hermeijer, G., et al. 2003. Characterization of SorCS1, an alternatively spliced receptor with completely different cytoplasmic domains that mediate different trafficking in cells. *J. Biol. Chem.* 278: 7390-7396.
6. Hermeijer, G., et al. 2004. The three SorCS genes are differentially expressed and regulated by synaptic activity. *J. Neurochem.* 88: 1470-1476.

CHROMOSOMAL LOCATION

Genetic locus: SORCS1 (human) mapping to 10q25.1; Sorcs1 (mouse) mapping to 19 D1.

SOURCE

SorCS1 (M-120) is a rabbit polyclonal antibody raised against amino acids 34-153 mapping near the N-terminus of SorCS1 of mouse origin.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

SorCS1 (M-120) is recommended for detection of isoforms 1-4 of precursor and mature SorCS1 of mouse, rat and, to a lesser extent, 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 SorCS1 siRNA (h): sc-44745, SorCS1 siRNA (m): sc-44746, SorCS1 shRNA Plasmid (h): sc-44745-SH, SorCS1 shRNA Plasmid (m): sc-44746-SH, SorCS1 shRNA (h) Lentiviral Particles: sc-44745-V and SorCS1 shRNA (m) Lentiviral Particles: sc-44746-V.

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.

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 or our catalog for detailed protocols and support products.



Try **SorCS1 (E-8): sc-365605**, our highly recommended monoclonal alternative to SorCS1 (M-120).