SANTA CRUZ BIOTECHNOLOGY, INC.

SR-B1 (G-13): sc-32342

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The macrophage class A scavenger receptors (SR-A) type I and II mediate the uptake of modified low density lipoprotein (LDL), while the scavenger receptor class B type I (SR-BI) mediates the selective uptake of cholesterol and cholesterol esters (CE) from HDLs into cells. SREC, Ox-LDL-R1, SR-A and SR-BI may all be involved in the early development of atherosclerosis. SR-BI, an integral membrane protein, acts as a receptor for various ligands, including apoptotic cells, cholesterol ester, phospholipids, lipoproteins and phospha-tidylserine. SR-B1, which may be involved in phagocytosis of apoptotic cells, enables the movement of cholesterol between the cell surface and extracellular donors and acceptors. Although it is widely expressed, it localizes primarily to cholesterol and sphingomyelin-enriched domains within the plasma membrane, called caveolae.

REFERENCES

1. Kawasaki, Y., et al. 2002. Phosphatidylserine binding of class B scavenger receptor type I, a phagocytosis receptor of testicular sertoli cells. J. Biol. Chem. 277: 27559-27566.
2. Scarselli, E., et al. 2002. The human scavenger receptor class B type I is a novel candidate receptor for the hepatitis C virus. EMBO J. 21: 5017-5025.
3. Morabia, A., et al. 2003. Association of extreme blood lipid profile phenotypic variation with 11 reverse cholesterol transport genes and 10 non-genetic cardiovascular disease risk factors. Hum. Mol. Genet. 12: 2733-2743.
4. Tai, E.S., et al. 2003. Polymorphisms at the SR-BI locus are associated with lipoprotein levels in subjects with heterozygous familial hyper-cholesterolemia. Clin. Genet. 63: 53-58.
5. Bartosch, B. et al. 2003. Cell entry of hepatitis C virus requires a set of co-receptors that include the CD81 tetraspanin and the SR-B1 scavenger receptor. J. Biol. Chem. 278: 41624-41630.
6. Dorfman, S.E., et al. 2005. Dietary fatty acids and cholesterol differentially modulate HDL cholesterol metabolism in Golden-Syrian hamsters. J. Nutr. 135: 492-498.
7. Manna, P. R., et al. 2005. Molecular mechanisms of Insulin-like growth factor-I mediated regulation of the steroidogenic acute regulatory protein in mouse leydig cells. Mol. Endocrinol. 20: 362-378.

CHROMOSOMAL LOCATION

Genetic locus: SCARB1 (human) mapping to 12q24.31; Scarb1 (mouse) mapping to 5 G1.1.

SOURCE

SR-B1 (G-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SR-B1 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-32342 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SR-B1 (G-13) is recommended for detection of SR-B1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

SR-B1 (G-13) is also recommended for detection of SR-B1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SR-B1 siRNA (h): sc-44752, SR-B1 siRNA (m): sc-44753, SR-B1 shRNA Plasmid (h): sc-44752-SH, SR-B1 shRNA Plasmid (m): sc-44753-SH, SR-B1 shRNA (h) Lentiviral Particles: sc-44752-V and SR-B1 shRNA (m) Lentiviral Particles: sc-44753-V.

Molecular Weight of SR-B1: 82 kDa.

Positive Controls: Mouse liver extract: sc-2256 or mouse brain extract: sc-2253.

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) 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.

SELECT PRODUCT CITATIONS

1. Umetani, M., et al. 2007. 27-Hydroxycholesterol is an endogenous SERM that inhibits the cardiovascular effects of estrogen. Nat. Med. 13: 1185-1192.
2. McLaren JE, et al. 2010. The TNF-like protein 1A-death receptor 3 pathway promotes macrophage foam cell formation *in vitro*. J Immunol. 184: 5827-5834.
3. McLaren, J.E., et al. 2010. IL-33 reduces macrophage foam cell formation. J. Immunol. 185: 1222-1229.

RESEARCH USE

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