SANTA CRUZ BIOTECHNOLOGY, INC.

SR-B1 (F-12): sc-518140

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 1 (SR-B1) mediates the selective uptake of cholesterol and cholesterol esters (CE) from HDLs into cells. SREC, Ox-LDL-R1, SR-A and SR-B1 may all be involved in the early development of atherosclerosis. SR-B1, an integral membrane protein, acts as a receptor for various ligands, including apoptotic cells, cholesterol ester, phospholipids, lipoproteins and phosphatidylserine. 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, SR-B1 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 hypercholesterolemia. 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.

CHROMOSOMAL LOCATION

Genetic locus: SCARB1 (human) mapping to 12q24.31.

SOURCE

SR-B1 (F-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 199-219 of SR-B1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SR-B1 (F-12) is available conjugated to agarose (sc-518140 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-518140 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518140 PE), fluorescein (sc-518140 FITC), Alexa Fluor® 488 (sc-518140 AF488), Alexa Fluor® 546 (sc-518140 AF546), Alexa Fluor® 594 (sc-518140 AF594) or Alexa Fluor® 647 (sc-518140 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518140 AF680) or Alexa Fluor® 790 (sc-518140 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

SR-B1 (F-12) is recommended for detection of SR-B1 of human origin by Western Blotting (starting dilution 1:100, 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 SR-B1 siRNA (h): sc-44752, SR-B1 shRNA Plasmid (h): sc-44752-SH and SR-B1 shRNA (h) Lentiviral Particles: sc-44752-V.

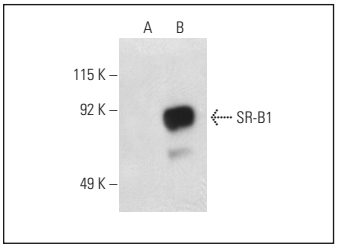
Molecular Weight of SR-B1: 82 kDa.

Positive Controls: human SR-B1 transfected whole cell lysate.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



SR-B1 (F-12): sc-518140. Western blot analysis of SR-B1 expression in non-transfected (**A**) and human SR-B1 transfected (**B**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.

SELECT PRODUCT CITATIONS

1. He, S., et al. 2025. High-density lipoprotein nanoparticles spontaneously target to damaged renal tubules and alleviate renal fibrosis by remodeling the fibrotic niches. Nat. Commun. 16: 1061.

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.