

SR-A (I-20): sc-20441

BACKGROUND

The macrophage class A scavenger receptor (SR-A) mediates the uptake of modified low-density lipoprotein (LDL). The gene encoding human SR-A maps to chromosome 8 and gives rise to two alternatively spliced isoforms, type I and II (SR-AI and SR-AII), which were originally cloned from the phorbol ester-treated human monocytic cell line THP-1. Both isoforms contain six domains: cytoplasmic (I), membrane-spanning (II), spacer (III), α -helical coiled-coil (IV), collagen-like (V), and a type-specific C-terminal (VI). Domain IV is essential for the trimerization of SR-A, whereas domain V is essential for the wide range of ligand recognition. SR-A is expressed in liver, placenta and brain. Both SR-AI and SR-AII mediate the uptake of LDLs in atherosclerotic lesions. A third isoform, SR-AIII, is unable to uptake LDLs and acts as a dominant negative isoform to possibly protect cells found in advanced atherosclerotic lesions. SR-A plays a role not only in many macrophage-associated pathological processes, including atherosclerosis and Alzheimer's disease, but also in host defense and as an adhesion molecule.

CHROMOSOMAL LOCATION

Genetic locus: MSR1 (human) mapping to 8p22.

SOURCE

SR-A (I-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SR-A of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-20441 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

SR-A (I-20) is recommended for detection of SR-A isoforms I and II of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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-A siRNA (h): sc-44116, SR-A shRNA Plasmid (h): sc-44116-SH and SR-A shRNA (h) Lentiviral Particles: sc-44116-V.

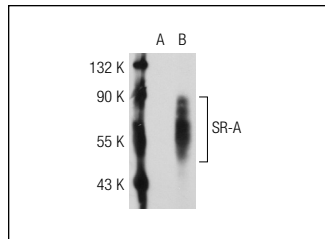
Molecular Weight of SR-A: 75 kDa.

Positive Controls: THP-1 cell lysate: sc-2238, SR-A (h2): 293T Lysate: sc-111501 or U-937 cell lysate: sc-2239.

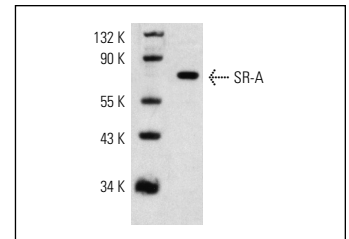
RECOMMENDED SECONDARY REAGENTS

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



SR-A (I-20): sc-20441. Western blot analysis of SR-A expression in non-transfected: sc-117752 (A) and human SR-A transfected: sc-111501 (B) 293T whole cell lysates.



SR-A (I-20): sc-20441. Western blot analysis of SR-A expression in THP-1 whole cell lysate.

SELECT PRODUCT CITATIONS

- Gieseg, S.P., et al. 2010. Oxidant production, oxLDL uptake, and CD36 levels in human monocyte-derived macrophages are downregulated by the macrophage-generated antioxidant 7,8-dihydroneopterin. *Antioxid. Redox Signal.* 13: 1525-1534.
- Hoppmann, S., et al. 2010. Scavenger receptors are associated with cellular interactions of S100A12 *in vitro* and *in vivo*. *Int. J. Biochem. Cell Biol.* 42: 651-661.
- Yang, H., et al. 2011. Interleukin-10 down-regulates oxLDL induced expression of scavenger receptor A and Bak-1 in macrophages derived from THP-1 cells. *Arch. Biochem. Biophys.* 512: 30-37.

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.



Try **SR-A (E-5): sc-166184** or **SR-A (E-10): sc-374130**, our highly recommended monoclonal alternatives to SR-A (I-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **SR-A (E-5): sc-166184**.