Human SR-AI/MSR
Alexa Fluor® 594-conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 351615

Catalog Number: FAB2708T

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human SR-AI/MSR in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant mouse SR-AI is observed.
Source	Monoclonal Mouse IgG_{2B} Clone # 351615
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human SR-AI/MSR Lys77-Leu451 Accession # P21757
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10^6 cells	THP-1 human acute monocytic leukemia cell line treated with PMA and Ca^{2+} ionomycin

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

The type I class A macrophage scavenger receptor (SR-AI; also MSR-AI) is a 70-80 kDa protein that belongs to the scavenger receptor superfamily (1-3). Receptors of this family contain characteristic extracellular domains and bind to a series of generally unrelated, but negatively-charged/polyanionic ligands (1, 3). Human SR-AI is a type II transmembrane glycoprotein that is 451 amino acids (aa) in length. It contains a 50 aa cytoplasmic tail, a 26 aa transmembrane segment and a 375 aa extracellular region (4, 5). The extracellular region contains four definitive domains, with a membrane proximal spacer of 33 aa, an α-helical coiled-coil domain of 163 aa, a collagen-like domain of 69 aa, and a cysteine-rich C-terminus of 110 aa (4, 6). The cysteine-rich domain (CRD) forms three intrachain disulfide bonds (7). The functional form of the molecule is a 220-230 kDa membrane-associated trimer that, in human, apparently has two disulfide bonded chains and a third noncovalently associated subunit (8, 9). Human extracellular region is 73% and 72% aa identical to bovine and mouse SR-AI extracellular region, respectively. The human gene for SR-A gives rise to three isoforms; the I isoform of 451 aa, the II isoform of 358 aa, and the III isoform of 388 aa (4, 5, 10). All are identical through the first 344 aa which includes the cytoplasmic tail through the collagenous domain. Isoform II (SR-AII) shows a severe truncation of the CRD, but is expressed on the cell surface. Isoform III (SR-AIII) has a modest truncation of the CRD, and cannot be expressed on the cell surface. However, relative to SR-AI, SR-AII is known to show differential sensitivity to LPS and receptor binding to gram-negative bacteria (9, 11), while SR-AIII is known to be a dominant-negative isoform (10). SR-AIII may achieve this by either heterotrimerizing with SR-AI, or simply eliminating the production of SR-AI mRNA.

References:

1. Platt, N. and S. Gordon (2001) J. Clin. Invest. **108**:649.
2. Linton, M.F. and S. Fazio (2001) Curr. Opin. Lipidol. **12**:489.
3. Platt, N. and S. Gordon (1998) Chem. Biol. **5**:R193.
4. Matsumoto, A. *et al.* (1990) Proc. Natl. Acad. Sci. USA **87**:9133.
5. Emi, M. *et al.* (1993) J. Biol. Chem. **268**:2120.
6. Naito, M. *et al.* (1992) Am. J. Pathol. **141**:591.
7. Resnick, D. *et al.* (1996) J. Biol. Chem. **271**:26924.
8. Ashkenas, J. *et al.* (1993) J. Lipid Res. **34**:983.
9. Penman, M. *et al.* (1991) J. Biol. Chem. **266**:23985.
10. Gough, P.J. *et al.* (1998) J. Lipid Res. **39**:531.
11. Peiser, L. *et al.* (2000) Inf. Immun. **68**:1953.

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