

## DESCRIPTION

|                                                                                                                                                                                                         |                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human                                                                           |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human SR-BI in direct ELISAs and Western blots.                         |
| <b>Source</b>                                                                                                                                                                                           | Monoclonal Mouse IgG <sub>1</sub> Clone # 947007                                |
| <b>Purification</b>                                                                                                                                                                                     | Protein A or G purified from hybridoma culture supernatant                      |
| <b>Immunogen</b>                                                                                                                                                                                        | Human embryonic kidney cell line HEK293-derived human SR-BI                     |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 750<br>Excitation Wavelength: 749 nm<br>Emission Wavelength: 775 nm |
| <b>Formulation</b>                                                                                                                                                                                      | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide                    |
| *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.

|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| <b>Western Blot</b>         | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunohistochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

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

## BACKGROUND

Scavenger Receptor, class B, member 1 (SR-B1), gene name SCARB1, is also known as CD36L1 (CD36-like 1) or CLA-1 (CD36 and LIMPII analogous 1) (1-5). SR-B1 is a transmembrane glycoprotein found on macrophages, liver cells and other steroidogenic cells as a lipoprotein receptor. The 552 amino acid (aa) human SR-B1 contains a central extracellular domain (ECD), flanked by N- and C-terminal transmembrane domains. Human splice variants differ at the N-terminal cytoplasmic and transmembrane domains (SR-B1II, 474 aa), the N-terminal end of the ECD (SR-B1I, 409 aa), or the C-terminal cytoplasmic domain (isoform 3, 552 aa) (2). The human SR-B1 ECD shares 80%, 80%, 89%, 86% and 84% aa sequence identity with mouse, rat, porcine, rabbit, and bovine SR-B1, respectively. SR-B1 functions in reverse cholesterol transport (RCT), which is thought to be anti-atherogenic by facilitating transport of cholesteryl esters from macrophages back to the liver for degradation (3). In rodent hepatocytes, SR-B1 is the main receptor mediating RCT, while human hepatocytes also express a second mediator, CETP (cholesteryl ester transfer protein) (3-5). The importance of SR-B1 in humans is shown by human SR-B1 genetic variants that alter lipid metabolism (3-7). For example, the P297S polymorphism lowers uptake of high-density lipoprotein (HDL) cholesterol in the liver and increases plasma HDL cholesterol (3-5). On endothelial cells, signaling through SR-B1 activates nitric oxide production, which attenuates monocyte adhesion (6). On adrenocortical cells, SR-B1 mediates uptake of cholesteryl esters from HDL for the synthesis of glucocorticoid hormones such as cortisol (3-5). On platelets, HDL binding to surface SR-B1 inhibits aggregation and increases platelet survival time (3-5). On human ovarian granulosa cells, deficiency of SR-B1 correlates with low fertility (3). SR-B1 and its SR-B1I isoform also bind bacterial lipopolysaccharides, facilitating uptake of various bacteria by cells such as peritoneal macrophages (8, 9). This uptake enhances inflammatory responses which, unless properly controlled, can result in sepsis (9-11).

## PRODUCT SPECIFIC NOTICES

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