Recombinant Mouse SR-AI/MSR

Catalog Number: 1797-MS

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived Trp79-Ser454, with an N-terminal 9-His tag Accession # AAA39747
N-terminal Sequence Analysis	His
Predicted Molecular Mass	42 kDa

SPECIFICATIONS

SDS-PAGE	60-70 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. Immobilized Recombinant Mouse SR-AI/MSR at 5 µg/mL (100 µL/well) can bind biotinylated advanced glycation endproducts of bovine serum albumin (AGE-BSA) with a linear range of 2-100 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in sterile PBS.
Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

The scavenger receptor (SR) family comprises a group of functionally defined membrane receptors that share the common ability to bind and internalize modified forms of Low Density Lipoproteins (mLDL) (1 - 3). Family members are classified alphabetically. The A class include four proteins: the three subtypes of SR-A (AI, AII, and AIII) that are generated by alternative splicing of the same gene, and a structurally similar protein named MARCO (4). All A class SRs are multidomain trimeric type II membrane proteins. SR-AI has an N-terminal cytoplasmic domain, a transmembrane domain, a spacer domain, an α-helical coiled coil, a collagen-like domain and a C-terminal cysteine-rich domain. SR-A is expressed by most tissue macrophages, dendritic cells and Kupffer cells. It is also highly expressed by microglia in neonatal as well as Alzheimer' Disease brains. SR-AI binds a broad range of polyanionic ligands including modified proteins (*e.g.* Oxidized, acetylated or maleylated LDL, Advanced glycation end-product proteins), polyribonucleotides (polyguanosine and polyinosine), polysaccharides (dextran sulfate, fucoidan), phospholipids (phosphatidylserine), bacterial products (lipopolysaccharide and lipoteichoic acid) and selected chemical compounds (silica, crocidolite asbestos). The ligand-binding region has been localized to a positively charged region in the carboxyl end of the collagen-like domain. Based on its ligand binding characteristics, SR-AI is implicated in many physiological and pathophysiological functions. Studies using SR-A knockout mouse have also suggested roles of SR-A in atherogenesis, host defense and innate immunity, acquired immune responses, macrophage adhesion, and phagocytosis of apoptotic cells (1 - 3).

References:

1. Daugherty, A. *et al.* (2000) Curr. Opin. Cardiovasc. Pulm. Ren. Invest. Drugs **2**:223.
2. Platt, N. and S. Gordon (2001) J. Clin. Invest. **108**:649.
3. Platt, N. and S. Gordon (1998) Chem. Biol. **5**:R193.
4. Elomaa, O. *et al.* (1995) Cell **80**:603.

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