

Product datasheet for **SC313114**

Macrophage Scavenger Receptor I (MSR1) (NM_002445) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Macrophage Scavenger Receptor I (MSR1) (NM_002445) Human Untagged Clone
Tag:	Tag Free
Symbol:	Macrophage Scavenger Receptor I
Synonyms:	CD204; phSR1; phSR2; SCARA1; SR-A; SR-AI; SR-AII; SR-AIII; SRA
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene sequence for NM_002445 edited
 ATAAATCAGTGCCTTTCTTTAGGACGAAAGAAGTATGGAGCAGTGGGATCACTTTCC
 AATCAACAGGAGGACACTGATAGCTGCTCCGAATCTGTGAAATTTGATGCTCGCTCAATG
 ACAGCTTTGCTTCTCCGAATCCTAAAAACAGCCCTTCCCTTCAAGAGAACTGAAGTCC
 TTCAAAGCTGCACTGATTGCCCTTTACCTCCTCGTGTTCGAGTTCTCATCCCTCTCATT
 GGAATAGTGGCAGCTCAACTCCTGAAGTGGGAAACGAAGAATTGCTCAGTTAGTTCAACT
 AATGCAAATGATATAACTCAAAGTCTCACGGGAAAAGGAAATGACAGCGAAGAGGAAATG
 AGATTTCAAGAAGTCTTTATGGAACACATGAGCAACATGGAGAAGAGAATCCAGCATATT
 TTAGACATGGAAGCCAACCTCATGGACACAGAGCATTTCAAAAATTCAGCATGACAACT
 GATCAAAGATTTAATGACATTCTTCTGCAGCTAAGTACCTTGTTTTCTCAGTCCAGGGA
 CATGGGAATGCAATAGATGAAATCTCCAAGTCCTAATAAGTTTGAATACCACATTGCTT
 GATTTGCAGCTCAACATAGAAAATCTGAATGGCAAAATCCAAGAGAATACCTTCAAACAA
 CAAGAGGAAATCAGTAAATTAGAGGAGCGTGTTTACAATGATATCAGCAGAAATTATGGCT
 ATGAAAGAAGAACAAGTGCATTTGGAACAGGAAAATAAAGGAGAAGTGAAGTACTGAAT
 AACATCACTAATGATCTCAGACTGAAAGATTGGGAACATTCTCAGACCTTGAGAAATATC
 ACTTTAATTCAAGGTCTCTGGACCCCGGGTAAAAAGGAGATCGAGGTCCCCTGGA
 GAAAGTGGTCCACGAGGATTTCCAGGTCCAATAGGTCTCCGGTCTTAAAGGTGATCGG
 GGAGCAATTGGCTTTCTGGAAGTCCGAGACTCCAGGATATGCCGGAAGGCCAGGAAAT
 TCTGGACAAAAGGCCAGAAAAGGGGAAAGGGAGTGGAACACATTAAGACCAGTACAA
 CTCCTGATCATATTAGGGCAGGGCCCTTTAA

Restriction Sites:	Please inquire
ACCN:	NM_002445
Insert Size:	1100 bp



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OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
OTI Annotation:	The ORF of this clone has been fully sequenced and found to be a perfect match to NM_002445.2.
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol style="list-style-type: none"> 1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	<u>NM_002445.2</u> , <u>NP_002436.1</u>
RefSeq Size:	2823 bp
RefSeq ORF:	1077 bp
Locus ID:	4481
UniProt ID:	<u>P21757</u>
Cytogenetics:	8p22
Domains:	Macscav_rec, Collagen
Protein Families:	Druggable Genome, Transmembrane

Gene Summary:

This gene encodes the class A macrophage scavenger receptors, which include three different types (1, 2, 3) generated by alternative splicing of this gene. These receptors or isoforms are macrophage-specific trimeric integral membrane glycoproteins and have been implicated in many macrophage-associated physiological and pathological processes including atherosclerosis, Alzheimer's disease, and host defense. The isoforms type 1 and type 2 are functional receptors and are able to mediate the endocytosis of modified low density lipoproteins (LDLs). The isoform type 3 does not internalize modified LDL (acetyl-LDL) despite having the domain shown to mediate this function in the types 1 and 2 isoforms. It has an altered intracellular processing and is trapped within the endoplasmic reticulum, making it unable to perform endocytosis. The isoform type 3 can inhibit the function of isoforms type 1 and type 2 when co-expressed, indicating a dominant negative effect and suggesting a mechanism for regulation of scavenger receptor activity in macrophages. [provided by RefSeq, Jul 2008]

Transcript Variant: This variant (SR-AII), also known as phSR2, uses two alternative exons and also lacks two downstream exons compared to variant SR-AI. These differences causes an alternate 3' end in the coding region, and has a distinct 3' UTR. It encodes isoform type 2 that is shorter and has a different C-terminus than isoform type 1.