

## CD204/MSR1 Protein, Rat, Recombinant (hFc)

### General Information

Synonyms:	macrophage scavenger receptor 1
Protein Construction:	A DNA sequence encoding the rat MSR1 (NP_001178868.1)(Trp79-Ser454) was expressed, fused with the Fc region of human IgG1 at the N-terminus. Predicted N terminal: Glu
Species:	Rat
Expression Host:	HEK293 Cells
Accession:	NP_001178868.1
Molecular Weight:	69.2 kDa (predicted); 89 kDa (reducing conditions)

### QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

**Reconstitution:**  
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

**Stability & Storage:**

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

**Shipping:**

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

Macrophage scavenger receptor types I and II, also known as Macrophage acetylated LDL receptor I and II, Scavenger receptor class A member 1, CD24, MSR1, and SCARA1, is a single-pass type II membrane protein that contains one collagen-like domain and one SRCR domain. Macrophages are distributed in all peripheral tissues and play a critical role in the first line of the innate immune defenses against bacterial infection by phagocytosis of bacterial pathogens through the macrophage scavenger receptor 1 (MSR1). MSR1 / SCARA1 is one of the

membrane glycoproteins implicated in the pathologic deposition of cholesterol in arterial walls during atherogenesis. Two types of receptor subunits exist. These receptors mediate the endocytosis of a diverse group of macromolecules, including modified low-density lipoproteins (LDL). MSR1 / SCARA1 is also involved in chronic inflammation which is a risk factor for prostate cancer. MSR1 1 gene was identified as a candidate susceptibility gene for hereditary prostate cancer and as a risk factor for sporadic prostate cancer.

### Reference

Wang L. et al., 2003, Nat Genet. 35 (2): 128-9.

Chen Y.C. et al., 2008, Cancer Epidemiol Biomarkers Prev. 17 (4): 1001-3.

Shirato K. et al., 2009, Pflugers Arch. 459 (1): 93-103. Sun J. et al., 2006, Prostate. 66 (7): 728-37.

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