

**DESCRIPTION**

<b>Source</b>	Mouse myeloma cell line, NS0-derived human CD68/SR-D1 protein		
	Human CD68/SR-D1 (Asn22-Ile320) Accession # P34810	IEGRMD	Human IgG <sub>1</sub> (Pro100-Lys330)
	N-terminus		C-terminus
<b>N-terminal Sequence Analysis</b>	Asn22		
<b>Structure / Form</b>	Disulfide-linked homodimer		
<b>Predicted Molecular Mass</b>	58 kDa		

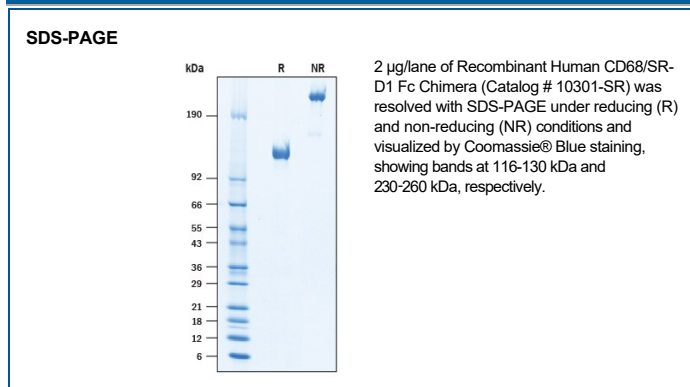
**SPECIFICATIONS**

<b>SDS-PAGE</b>	116-130 kDa, under reducing conditions
<b>Activity</b>	Measured by its binding ability in a functional ELISA. When Recombinant Human S100A8 (Catalog # 9876-S8) is immobilized at 10 µg/mL (100 µL/well), it binds to Recombinant Human CD68/SR-D1 Fc Chimera with an ED <sub>50</sub> of 5-30 µg/mL.
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the protein by the LAL method.
<b>Purity</b>	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 500 µg/mL in PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**DATA**



**BACKGROUND**

CD68, also called Scavenger Receptor D1 (SR-D1) and LAMP-4, is a heavily glycosylated type I transmembrane glycoprotein that belongs to the LAMP family (1). Human CD68 contains 354 amino acids (aa), with a 21 aa signal sequence and a 298 aa extracellular domain (ECD), a 25 aa transmembrane domain, and a 10 aa cytoplasmic domain. The ECD of CD68 has 9 glycosylation sites and a mucin-like region in aa 23-140. Within the ECD, human CD68 shares a 65% and 67% amino acid sequence identity with that of mouse and rat CD68, respectively. CD68 is expressed on monocytes and tissue macrophages and serves as a scavenger receptor for oxidized LDL (2). In contrast to other members of the LAMP-family of glycoproteins which are ubiquitously expressed in all cell types, CD68 appeared to have a more restricted, cell-type specific pattern of expression (3, 4). CD68 is also a biomarker of rheumatoid arthritis and Hodgkin's lymphoma (5, 6). CD68 influences the functions of cells through NF- $\kappa$ B/focal adhesion kinase pathway (7). In addition, CD68 on macrophages binds tightly to both S100A8 and S100A9 to enhance the cell immunity (8).

**References:**

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6. Touati, M. *et al.* (2015) **56**:332.
7. Wang, H. *et al.* (2014) *Cancer Lett.* **345**:91.
8. Okada, K. *et al.* (2016) *J. of Leukoc. Bio.* **100**:1093.