

**DESCRIPTION**

<b>Source</b>	Chinese Hamster Ovary cell line, CHO-derived mouse CD300c protein		
	Mouse CD300c (His22-Pro187) Accession # A2A7V7	IEGRMDP	Mouse IgG <sub>2a</sub> (Glu98-Lys330)
	N-terminus		C-terminus
<b>N-terminal Sequence</b>	His22		
<b>Analysis</b>			
<b>Structure / Form</b>	Disulfide-linked homodimer		
<b>Predicted Molecular Mass</b>	45 kDa		

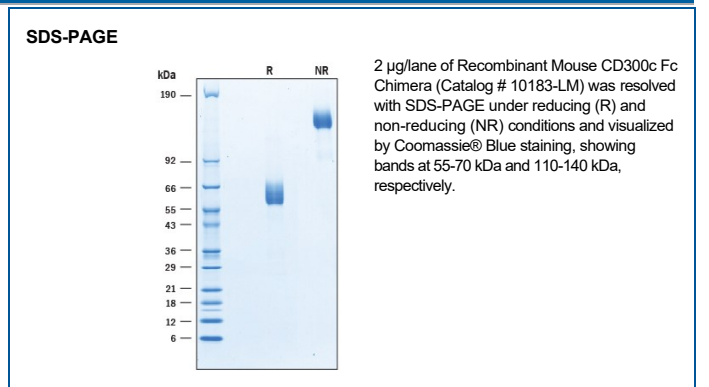
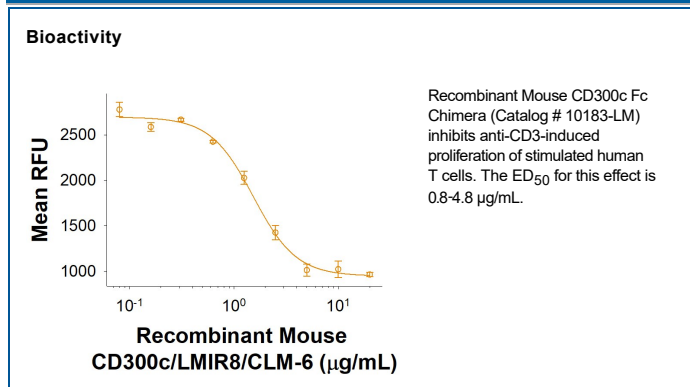
**SPECIFICATIONS**

<b>SDS-PAGE</b>	55-70 kDa, under reducing conditions
<b>Activity</b>	Measured by its ability to inhibit anti-CD3-induced proliferation of stimulated human T cells. The ED <sub>50</sub> for this effect is 0.8-4.8 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**

CMRF-35-like molecule-6 (CLM-6), known as LMIR8, CMRF-35A1, and CD300c, is a type I transmembrane glycoprotein belonging to the immunoregulatory signaling (IRS) family of immunoglobulin-like molecules (1). There have been 7 human and 9 mouse CD300/CLM family members identified, and they modulate a broad and diverse array of immune cell processes via their paired activating and inhibitory receptor functions (2, 3). Mouse CD300c consists of an extracellular domain (ECD) with one Ig-like domain, a single transmembrane segment, and a short cytoplasmic tail (2). The mature ECD of mouse CD300c is 167 amino acids and shares 48% sequence identity with human CD300c. A charged amino acid residue in the transmembrane domain of CD300c/CLM-6, found in additional family members CLM-2, CLM-4, CLM-5, and CLM-7, enables interactions with adapter proteins (3,4). CD300c has been shown to be a FcRγ-coupled receptor that is selectively expressed in Plasmacytoid dendritic cells (pDCs) (5). CD300c signals might negatively regulate the activation of pDCs in response to viral infections (5). Additional research into CD300 receptor function during viral infections could help develop novel anti-viral therapies (6).

**References:**

1. Clark, G.J. *et al.* (2001) *Tissue Antigens* **57**:415.
2. Borrego F. (2013) *Blood* **121**:1951.
3. Vitallé J. *et al.* (2019) *Eur J Immunol.* **49**(3):364.
4. Clark, G.J. *et al.* (2009) *Trends in Immunology* **30**:209.
5. Kaitani, A. *et al.* (2018) *Scientific Reports* **8**:8259.
6. Graziano, V *et al.* 2019. *Viruses.* **11**(6):498.