Recombinant Human CD200 Fc Chimera

Catalog Number: 2724-CD

DESCRIPTION

Source

Mouse myeloma cell line, NS0-derived human CD200 protein

N-terminal Sequence Analysis	No results obtained: Gln31 predicted
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	49 kDa (monomer)

SPECIFICATIONS

SDS-PAGE	70-75 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human CD200 R1 Fc Chimera (Catalog # 3414-CD) is immobilized at 2 µg/mL (100 µL/well), the concentration of Recombinant Human CD200 Fc Chimera that produces 50% of the optimal binding response is appoximately 2.5-15 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
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 at ambient temperature. 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

CD200, also known as OX-2, is a 45 kDa transmembrane immunoregulatory protein that belongs to the immunoglobulin superfamily (1, 2). The human CD200 cDNA encodes a 278 amino acid (aa) precursor that includes a 30 aa signal sequence, a 202 aa extracellular domain (ECD), a 27 aa transmembrane segment, and a 19 aa cytoplasmic domain. The ECD is composed of one Ig-like V-type domain and one Ig-like C2-type domain (3). A splice variant of CD200 has been described and has a truncated cytoplasmic tail. Within the ECD, human CD200 shares 76% aa sequence identity with mouse and rat CD200. CD200 is widely but not ubiquitously expressed (4). Its receptor (CD200R) is restricted primarily to mast cells, basophils, macrophages, and dendritic cells, which suggests myeloid cell regulation as the major function of CD200 (5-7). CD200 knockout mice are characterized by increased macrophage number and activation and are predisposed to autoimmune disorders (8). CD200 and CD200R associate *via* their respective N-terminal Ig-like domains (9). In myeloid cells, CD200R initiates inhibitory signals following receptor-ligand contact (6, 7, 10). In T cells, however, CD200 functions as a costimulatory molecule independent of the CD28 pathway (11). Several additional CD200R-like molecules have been identified in human and mouse, but their capacity to interact with CD200 is controversial (12, 13). Several viruses encode CD200 homologs which are expressed on infected cells during the lytic phase (14, 15). Like CD200 itself, viral CD200 homologs also suppress myeloid cell activity, enabling increased viral propagation (5, 14-16).

References:

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