

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CD200 in ELISAs. In sandwich immunoassays, no cross-reactivity or interference with recombinant mouse CD200 is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 325523
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human CD200 Gln31-Gly232 Accession # P41217.3
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

Human CD200 Sandwich Immunoassay		Reagent
ELISA Capture	2-8 µg/mL	Human CD200 Antibody (Catalog # MAB27243)
ELISA Detection	0.5-2.0 µg/mL	Human CD200 Biotinylated Antibody (Catalog # BAM27242)
Standard		Recombinant Human CD200 Fc Chimera (Catalog # 2724-CD)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile Tris-buffered saline, pH 7.3 (20 mM Trizma base, 150 mM NaCl) containing 0.1% bovine serum albumin.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month from date of receipt, 2 to 8 °C, reconstituted. ● 6 months from date of receipt, -20 to -70 °C, reconstituted.

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 co-stimulatory 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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