Mouse/Rat CD200 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF3355

DESCRIPTION

Species Reactivity	Mouse/Rat
Specificity	Detects mouse CD200 in direct ELISAs and mouse CD200 and rat CD200 Western blots. In direct ELISAs, approximately 50% cross-reactivity with recombinant human CD200 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse CD200 Gln31-Gly232 Accession # O54901
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

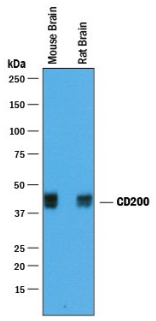
APPLICATIONS

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.*

	Recommended Concentration	Sample
Western Blot	0.25 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below
Simple Western	2.5 µg/mL	See Below

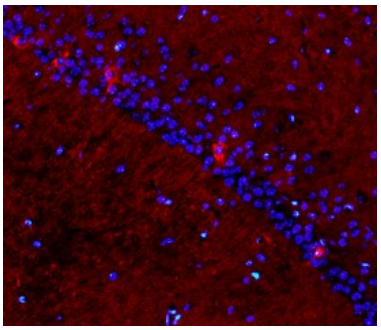
DATA

Western Blot



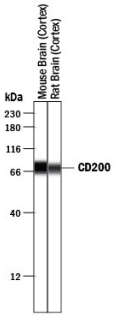
Detection of Mouse and Rat CD200 by Western Blot. Western blot shows lysates of mouse brain tissue and rat brain tissue. PVDF membrane was probed with 0.25 µg/mL of Goat Anti-Mouse/Rat CD200 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3355) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF019). A specific band was detected for CD200 at approximately 38-45 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



CD200 in Mouse Brain. CD200 was detected in perfusion fixed frozen sections of normal mouse brain using Goat Anti-Mouse/Rat CD200 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3355) at 15 µg/mL overnight at 4 °C. Tissue was stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to plasma membranes of hippocampal neurons. View our protocol for Fluorescent IHC Staining of Frozen Tissue Sections.

Simple Western



Detection of Mouse and Rat CD200 by Simple Western™. Simple Western lane view shows lysates of mouse brain (cortex) tissue and rat brain (cortex) tissue, loaded at 0.2 mg/mL. A specific band was detected for CD200 at approximately 73-76 kDa (as indicated) using 2.5 µg/mL of Goat Anti-Mouse/Rat CD200 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3355) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
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. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

CD200, also known as OX-2, is a 45 kDa type I transmembrane immunoregulatory protein that belongs to the immunoglobulin superfamily (1, 2). The mouse 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-likeV-type and one Ig-like C2-type domain (3). Splice variants of CD200 have been described in human but not in mouse. Within the ECD, mouse CD200 shares 76% and 94% aa sequence identity with human and rat CD200, respectively. 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 CD200 R associate via their respective N-terminal Ig-like domains (9). In myeloid cells, CD200 R initiates inhibitory signals following receptor-ligand contact (6, 7, 10). In T cells, CD200 functions as a costimulatory molecule that is independent of the CD28 pathway (11). Several additional CD200 R-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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