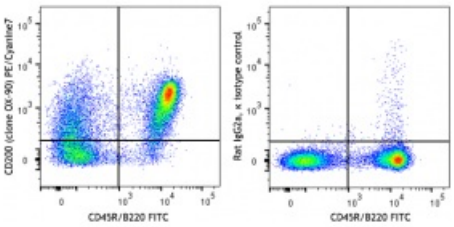
SONY

Product Data Sheet

PE/Cyanine7 anti-mouse CD200 (OX2)

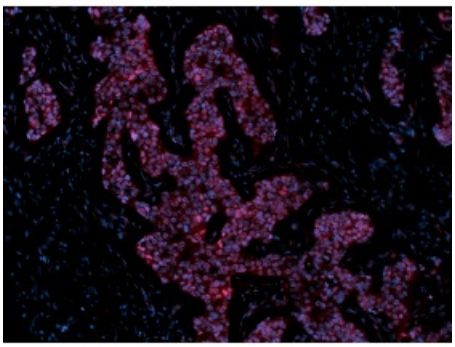
Catalog # / Size:	1219090 / 100 µg 1219085 / 25 µg
Clone:	OX-90
Isotype:	Rat IgG2a, κ
Immunogen:	Soluble fusion protein of the extracellular region of mouse OX-2 antigen with domains 3 and 4 of rat CD4 fusion protein.
Reactivity:	Mouse
Preparation:	The antibody was purified by affinity chromatography and conjugated with PE/Cyanine7 under optimal conditions.
Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Workshop Number:	V-CD28.05
Concentration:	0.2 mg/mL



C57BL/6 mouse splenocytes were stained with CD45R/B220 FITC and CD200 (clone OX-90) PE/Cyanine7 (left), or rat IgG2a, ? isotype control (right).

Applications:

Applications:	Flow Cytometry
Recommended Usage:	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is =0.25 µg per million cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes:	The MEC14.7 antibody does not stain bone marrow cells like some other mouse CD34 antibodies, probably because the antibody recognizes a different epitope from other mAbs. Additional reported applications (for the relevant formats) include: immunoprecipitation, Western blotting[6], and immunohistochemistry of acetone-fixed frozen sections and paraffin-embedded sections[2,4,5,6].



Formalin-fixed paraffin-embedded human breast cancer tissue slices were deparaffinized and rehydrated. Antigen retrieval was done with Tris-Buffered Saline 1X (1.0 M, pH 7.4) at 95°C for 40 minutes, washed with PBS/0.05% Tween 20 twice for five minutes, permeabilized with 0.5% Triton X-100 for ten minutes, and blocked with 5% FBS and 0.2% gelatin for 30 minutes. Then, the slices were stained with 5 µg/mL anti-EGFR (clone A19002A) Alexa Fluor® 647 (red) at 4°C overnight. Nuclei were counterstained with DAPI (green). The image was captured with a 10X objective.

Application References:

1. Boackle S, *et al.* 2001 *Immunity* 15:775.
2. de Andres B, *et al.* 2012. *J. Immunol.* 189:2300. PubMed
3. Chiu YK, *et al.* 2014. *J Immunol.* 193:2207. PubMed
4. Koening PA, *et al.* 2014. *J Biol Chem.* 289:34490. PubMed

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Description: CD200 (OX-2 antigen) is a type-1 membrane glycoprotein containing two extracellular Ig-like domains. CD200 a highly conserved type I membrane glycoprotein that is expressed on a variety of cell types including thymocytes, some T cells, endothelial and follicular dendritc cells, B cells, and brain tissue (neurons); but not on NK cells, granulocytes, monocytes, or macrophages. CD200 costimulates T cell proliferation. It may regulate myeloid cell activity in a variety of tissues. CD200 is the ligand for CD200 receptor (CD200R). The CD200 Receptor is restricted to myeloid cells, and it is believed that its engagement with CD200 results in inhibition and/or downregulation of myeloid cell activity. Blocking of CD200/CD200R interactions decreases myeloid cell inhibitory thresholds which results in enhanced immune activation.

Antigen References:

1. Hoek RM, *et al.* 2000. *Science* 290:1768.
2. Gorczynski R, *et al.* 2004. *J. of Immunol.* 172:7744.
3. Gorczynski L, *et al.* 1999. *J. Immunol.* 162:774.
4. Rosenblum MD, *et al.* 2004. *Blood* 103:2691.
5. Zhang S, *et al.* 2004. *J. of Immunol.* 173:6786.
6. Barclay AN, *et al.* 2002. *Trends Immunol.* 23:285.