

Product datasheet for **CL116BX**

Endothelium Mouse Monoclonal Antibody [Clone ID: OX-43]

Product data:

Product Type:	Primary Antibodies
Clone Name:	OX-43
Applications:	FC, IHC
Recommended Dilution:	Flow Cytometry.
Reactivity:	Rat
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Rat Peritoneal Macrophages Immunocyte Donor: BALB/c Spleen Fusion Partner: NSO/U

Specificity: This monoclonal antibody recognizes a surface protein of MW 90 kDa and generally reacts with all vascular endothelium in the rat except that of brain capillaries. This is the reciprocal tissue pattern to that of the transferrin receptor. It has been shown that the expression of this Ab is on the luminal surface of blood vessels. This antibody labels all peritoneal macrophages, a sub-population of alveolar macrophages (65%) and rare interstitial cells in the brain and heart. In addition, anti-rat endothelium mAb labels circulating erythrocytes, 22% of peripheral blood mononuclear cells and 17% of nucleated cells in bone marrow. This Antibody does not label granulocytes, dendritic cells, lymphocytes, or lymphocyte blasts, thymocytes, lymph node cells, mast cells and platelets. This antibody has been invaluable in the demonstration of molecular heterogeneity of vascular endothelium.

Formulation: PBS, 0.02% NaN₃ and EIA grade BSA as a stabilizing protein to bring total protein concentration to 4-5 mg/ml.

Label: Biotin

State: Liquid purified Ig

Concentration: lot specific

Purification: Protein G Chromatography

Conjugation: Biotin



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Background:

The endothelium is located at the interface between the blood and the vessel wall. The cells are in close contact and form a slick layer that prevents blood cell interaction with the vessel wall as blood moves through the vessel lumen. The endothelium consists of simple squamous epithelium that lines the lumen of all blood vessels. It plays a critical role in the mechanics of blood flow, the regulation of coagulation, leukocyte adhesion, and vascular smooth muscle cell growth, and also serves as a barrier to the transvascular diffusion of liquids and solutes. For years the endothelium was thought of as an inert single layer of cells that passively allow the passage of water and other small molecules across the vessel wall. However, this dynamic tissue performs many other active functions, such as the secretion and modification of vasoactive substances and the contraction and relaxation of vascular smooth muscle.

Synonyms:

endothelial cells, endothelial marker

Note: Protocol: **FLOW CYTOMETRY ANALYSIS:**

Method:

1. Prepare a cell suspension in media A. For cell preparations, deplete the red blood cell population with Lympholyte®-Rat cell separation medium.
2. Wash 2 times.
3. Resuspend the cells to a concentration of 2×10^7 cells/ml in media A. Add 50 μ l of this suspension to each tube (each tube will then contain 1×10^6 cells, representing 1 test).
4. To each tube, add 1.0 μ g of this Ab per 10^6 cells.
5. Vortex the tubes to ensure thorough mixing of antibody and cells.
6. Incubate the tubes for 30 minutes at 4°C.
7. Wash 2 times at 4°C.
8. Add 100 μ l of secondary antibody (Streptavidin-FITC) at a 1:500 dilution.
9. Incubate tubes at 4°C for 30 - 60 minutes (It is recommended that tubes are protected from light since most fluorochromes are light sensitive).
10. Wash 2 times at 4°C.
11. Resuspend the cell pellet in 50 μ l ice cold media B.
12. Transfer to suitable tubes for flow cytometric analysis containing 15 μ l of propidium iodide at 0.5 mg/ml in PBS. This stains dead cells by intercalating in DNA.

Media:

- A. Phosphate buffered saline (pH 7.2) + 5% normal serum of host species + sodium azide (100 μ l of 2M sodium azide in 100 mls).
- B. Phosphate buffered saline (pH 7.2) + 0.5% Bovine serum albumin + sodium azide (100 μ l of 2M sodium azide in 100 mls).

Results - Tissue Distribution:

Rat Strain: Wistar

Cell Concentration: 1×10^6 cells per test

Antibody Concentration Used: 1.0 μ g/ 10^6 cells

Isotypic Control: Biotin Mouse IgG1.

Cell Source Percentage of cells stained above control:

Peritoneal Macrophages: 91.5%

Thymus: 8.9%

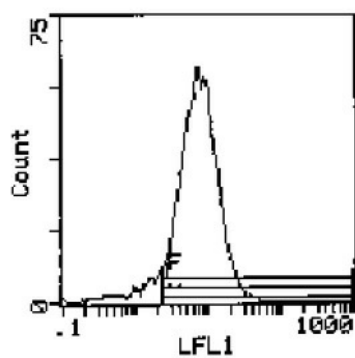
Results - Strain Distribution:

Antibody Concentration Used: 1.0 μ g/ 10^6 cells

Strains Tested: Wistar, Brown Norway, Buffalo, Fischr 344

Positive: Wistar, Brown Norway, Buffalo, Fischr 344

Negative: none

Product images:

Cell Source: Peritoneal Macrophages
Percentage of cells stained above control: 91.5%