

Product datasheet for **SM311A**

MHC Class I (RT1Aa) Mouse Monoclonal Antibody [Clone ID: OX-18]

Product data:

| | |
|-----------------------|--|
| Product Type: | Primary Antibodies |
| Clone Name: | OX-18 |
| Applications: | FC, IHC, IP |
| Recommended Dilution: | Flow Cytometry (see Protocols) |
| Reactivity: | Rat |
| Host: | Mouse |
| Isotype: | IgG1 |
| Clonality: | Monoclonal |
| Immunogen: | Rat spleen membrane glycoproteins depleted of Ia-A antigens. Donor: BALB/c spleen. Fusion Partner: X63 Ag8.653. |
| Specificity: | This monoclonal antibody recognizes a monomorphic determinant of rat Class I MHC antigen (RT1.A) and thus reacts with all rat strains tested including AO(RT1 μ), DA (RT1a), LEW (RT11) and PVG (RT1c). However, quantitative measurements suggest that only a subfraction of the total Class I molecules are recognized (2). This antibody labels all peripheral lymphocytes but only a subfraction of thymocytes. It may be that the weakly labelled cells do in fact express some OX-18 antigenic determinants but there is clearly a major quantitative difference amongst thymocytes. This monoclonal used in tissue sections preferentially labels lymphoid cells in the medulla of the thymus including those cells with the marker phenotype of mature T lymphocytes. |
| Formulation: | PBS State: Azide Free State: Liquid purified Ig |
| Concentration: | lot specific |
| Purification: | Protein G Chromatography |
| Conjugation: | Unconjugated |
| Storage: | Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing. Handle under aseptic conditions. |



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Stability: Shelf life: one year from despatch.

Database Link: [P16391](#)

Background: MHC Class I molecules play a central role in the immune system by presenting peptides derived from the endoplasmic reticulum lumen. MHC class I antigens are heterodimers consisting of one alpha chain (44kDa) with beta 2 microglobulin (11.5 kDa). The antigen is expressed by all somatic cells at varying levels. MHC Class I molecules are expressed on most nucleated cells where they present endogenously synthesized antigenic peptides to CD8+ T lymphocytes, which are usually cytotoxic T cells. Fibroblasts or neurons however only show a low level of antigen.

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 0.2-0.5 μ g* of this Ab.
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 (Goat anti-mouse IgG (H+L)-FITC conjugate) at 1:500 dilution.
9. Incubate tubes at 4°C for 30-60 minutes. (It is recommended that the 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: 0.2 μ g/ 10^6 cells

Isotypic Control: Mouse IgG1,k

Cell Source Percentage of cells stained above control:

Thymus: 38.1%

Spleen: 97.0%

Lymph Node: 99.9%

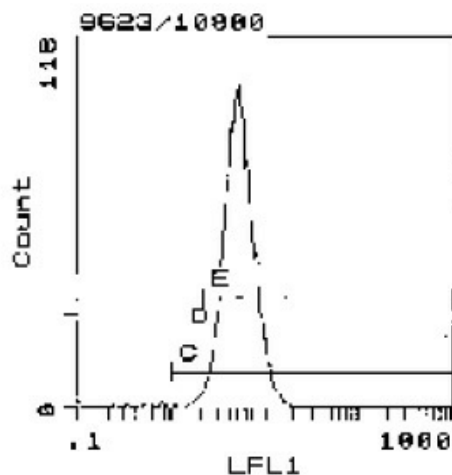
Results - Strain Distribution:
Antibody Concentration Used: 0.2 μ g/ 10^6 cells

Strains Tested: Wistar, Buffalo, Fischer 344

Positive: Wistar, Buffalo, Fischer 344

Negative: None

Product images:



Cell Source: Spleen - Percentage of cells stained above control: 97.0%