

SM311F

Monoclonal Antibody to MHC Class I (RT1Aa) - FITC

Alternate names:	RT1 class I histocompatibility antigen AA alpha chain
Quantity:	0.1 mg
Concentration:	0.1 mg/ml
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.
Uniprot ID:	P16391
NCBI:	10116
Host / Isotype:	Mouse / IgG1
Recommended Isotype Controls:	SM20F (for use in rat samples)
Clone:	OX-18
Immunogen:	Rat spleen glycoproteins. Spleen cells from immunised BALB/c mice were fused with cells of the mouse P3X63Ag8.653 myeloma cell line.
Format:	State: Liquid purified IgG Purification: Affinity chromatography on Protein G Buffer System: PBS, pH7.4 containing 0.09% Sodium Azide and 1% Bovine Serum Albumin Label: FITC – Fluorescein Isothiocyanate Isomer 1
Applications:	Flow Cytometry: Neat - 1/10; Use 10µl of the suggested working dilution to label 10e6 cells in 100µl; This product is routinely tested in flow cytometry on rat splenocytes. Immunohistology: Acetone fixation recommended - the antigen is sensitive to fixation with paraformaldehyde. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	This antibody recognises a monomorphic determinant of MHC Class I (RT1A), expressed by all rat strains. However, quantitative measurements suggest that not all of the class I molecules are recognised. Species: Rat. Other species not tested.

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.
This product is photosensitive and should be protected from light.
Shelf life: one year from despatch.

General Readings:

1. Fukumoto T, McMaster WR, Williams AF. Mouse monoclonal antibodies against rat major histocompatibility antigens. Two Ia antigens and expression of Ia and class I antigens in rat thymus. *Eur J Immunol.* 1982 Mar;12(3):237-43. PubMed PMID: 6178598.
2. Bukovský A, Presl J, Zidovský J. Association of some cell surface antigens of lymphoid cells and cell surface differentiation antigens with early rat pregnancy. *Immunology.* 1984 Aug;52(4):631-40. PubMed PMID: 6146566.
3. Osawa H, Herrmann T, Diamantstein T. Inhibition of IL 2-dependent proliferation of rat T lymphoblasts by the monoclonal antibody ART62 which reacts with MHC class 1 antigens. *J Immunol.* 1985 Jun;134(6):3901-6. PubMed PMID: 2580898.
4. Stet, R.J.M. et al. (1987) U9F4: A monoclonal antibody recognizing a rat polymorphic class I determinant. *Transpl. Proc.* 19: 3004-3005.
5. Fujikawa, L. S. et al. (1989) Class II antigens on retinal vascular endothelium, pericytes, macrophages and lymphocytes of the rat. *Invest. Ophthalmol. Vis. Sci.* 30 1): 66-73
6. Zhai Y, Knechtle S. Two distinct forms of soluble MHC class I molecules synthesized by different mechanisms in normal rat cells in vitro. *Hum Immunol.* 1998 Jul;59(7):404-14. PubMed PMID: 9684990.

Pictures:

Staining of rat spleen cells with MOUSE ANTI RAT RT1A (CLASS I MONOMORPHIC): FITC (SM311F).

