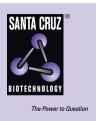
## SANTA CRUZ BIOTECHNOLOGY, INC.

# MHC class Iα (F21-2): sc-52539



### BACKGROUND

Major histocompatibility complex (MHC) molecules form an integral part of the immune response system. They are cell-surface receptors that bind peptides and present them to T lymphocytes. Human leukocyte antigens (HLAs) are polymorphic members of the MHC family that are specifically involved in the presentation of antigens to the T cell receptor. There are two classes of HLA antigens: class I (HLA-A, HLA-B and HLA-C) and class II (HLA-D). Class I molecules are expressed in nearly all cells and play a central role in the immune system by presenting peptides derived from the endoplasmic reticulum. The differential structural properties of MHC class I and class II molecules account for their respective roles in activating different populations of T lymphocytes. HLA-A encodes a membrane anchored heavy chain which hetero-dimerizes with a light chain ( $\beta$ -2-Microglobulin) to form MHC-I. Polymorphisms yield hundreds of HLA-A alleles.

## REFERENCES

- Murakami, M., Kakizaki, S., Takayama, H., Takagi, H. and Mori, M. 1999. Autoimmune thyroid disease induced by interferon therapy. Nippon. Rinsho. 8: 1779-1783.
- Collins, K.L. and Baltimore, D. 1999. HIV's evasion of the cellular immune response. Immunol. Rev. 168: 65-74.
- Dela Cruz, C.S., Tan, R., Rowland-Jones, S.L. and Barber, B.H. 2000. Creating HIV-1 reverse transcriptase cytotoxic T lymphocyte target structures by HLA-A2 heavy chain modifications. Int. Immunol. 9: 1293-1302.
- Itoh, K., Yamana, H., Shichijo, S. and Yamada, A. 2000. Human tumor-rejection antigens and peptides from genes to clinical research. Nippon. Geka. Gakkai. Zasshi. 9: 612-617.
- Tourdot, S., Scardino, A., Saloustrou, E., Gross, D.A., Pascolo, S., Cordopatis, P., Lemonnier, F.A. and Kosmatopoulos, K. 2000. A general strategy to enhance immunogenicity of low-affinity HLA-A2. 1-associated peptides: implication in the identification of cryptic tumor epitopes. Eur. J. Immunol. 12: 3411-3421.

## CHROMOSOMAL LOCATION

Genetic locus: HLA-A (human) mapping to 6p21.3.

## SOURCE

MHC class I $\alpha$  (F21-2) is a mouse monoclonal antibody raised against white blood cells of avian origin.

#### PRODUCT

Each vial contains 100  $\mu g~lgG_1$  in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

### **STORAGE**

Store at 4° C, \*\*D0 NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

MHC class I $\alpha$  (F21-2) is recommended for detection f both the native as well as the denatured forms of MHC class I $\alpha$  of chicken origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10<sup>6</sup> cells).

Molecular Weight of MHC class Ia: 45 kDa.

#### **RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker<sup>™</sup> compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

#### **RESEARCH USE**

For research use only, not for use in diagnostic procedures.

#### PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.