SANTA CRUZ BIOTECHNOLOGY, INC.

H2-I-A/I-E (M5/114): sc-23940

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Major histocompatibility complex (MHC) molecules, which include human leukocyte antigens (HLAs), form an integral part of the immune response system. They are cell-surface receptors that bind foreign peptides and present them to cytotoxic T lymphocytes (CTLs). The differential structural properties of MHC class I and class II molecules account for their respective roles in activating different populations of T lymphocytes. The M5/114 (M5/114.15.2) monoclonal antibody reacts with the mouse MHC class II, both I-A and I-E subregion-encoded glycoproteins (I-A^b, I-A^d, I-A^q, I-E^d, I-E^k, not I-A^f, I-A^k or I-A^s). It detects a polymorphic determinant present on B cells, monocytes, macrophages, dendritic cells, and activated T lymphocytes from mice carrying the H-2^b, H-2^d, H-2^q, H-2^p, H-2^r and H-2^u but not from mice carrying the H-2^s or H-2^f haplotypes. The M5/114 (M5/114.15.2) mAb is reported to inhibit I-A-restricted T cell responses of the H-2^b, H-2^d, H-2^q, H-2^u but not H-2^f, H-2^k or H-2^s haplotypes.

REFERENCES

1. Bhattacharya, A., et al. 1981. A shared alloantigenic determinant on I^a antigens encoded by the I-A and I-E subregions: evidence for I region gene duplication. J. Immunol. 127: 2488-2495.
2. Germain, R. N., et al. 1982. A single monoclonal anti-I^a antibody inhibits antigen-specific T cell proliferation controlled by distinct I^r genes mapping in different H2-I subregions. J. Immunol. 128: 1409-1413.
3. Janeway, C.A., et al. 1997. Immunobiology: The Immune System in Health and Disease. New York: Garland Publishing.
4. Little, A.M., et al. 1999. Polymorphism and evolution of HLA class I and II genes and molecules. Rev. Immunogenet. 1: 105-123.
5. Gunther, E., et al. 2001. The major histocompatibility complex of the rat *(Rattus norvegicus)*. Immunogenetics 53: 520-542.
6. Van Kaer, L. 2001. Accessory proteins that control the assembly of MHC molecules with peptides. Immunol. Res. 23: 205-214.

SOURCE

H2-I-A/I-E (M5/114) is a rat monoclonal antibody raised against activated C57BL/6 mouse spleen cells.

PRODUCT

Each vial contains 200 µg IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

H2-I-A/I-E (M5/114) is available conjugated to agarose (sc-23940 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-23940 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-23940 PE), fluorescein (sc-23940 FITC), Alexa Fluor® 488 (sc-23940 AF488), Alexa Fluor® 546 (sc-23940 AF546), Alexa Fluor® 594 (sc-23940 AF594) or Alexa Fluor® 647 (sc-23940 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-23940 AF680) or Alexa Fluor® 790 (sc-23940 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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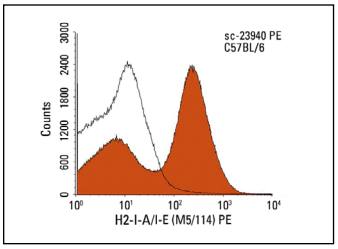
APPLICATIONS

H2-I-A/I-E (M5/114) is recommended for detection of I-A^b, I-A^d, I-A^q, I-E^d and I-E^k MHC class II alloantigens of mouse origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells); non cross-reactive with I-A^f, I-A^k or I-A^s; detects a polymorphic determinant present on B cells, monocytes, macrophages, dendritic cells and activated T lymphocytes from mice carrying the H-2^b, H-2^d, H-2^q, H-2^p, H-2^r and H-2^u but not mice carrying the H-2^s or H-2^f.

Molecular Weight of H2-I-A/I-E: 30 kDa.

DATA



H2-I-A/I-E (M5/114) PE: sc-23940 PE. FCM analysis of C57BL/6 mouse spenocytes. Black line histogram represents the isotype control, normal rat IgG_{2b}-PE: sc-2873.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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