Leinco Technologies, Inc.
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Anti-Mouse I-A/I-E (MHC Class II)

PE

Monoclonal Antibody

Product Information

Product No.:	H274
Clone:	M5/114.15.2
RRID:	AB_2892898
Isotype:	Rat IgG2b

Product Description

Specificity:
Clone M5/114.15.2 recognizes an epitope on the mouse MHC class II molecules I-A^b, I-A^d, I-A^q, I-E^d, and I-E^k. Clone M5/114.15.2 does not react with I-A^f, I-A^k, or I-A^s.

Antigen Distribution:
I-$A^{b/d/q}$ and I-$E^{d/k}$ are expressed on antigen-presenting cells, including macrophages, monocytes, DCs, and B cells, and activated T cells from mice of the I-$A^{b/d/q}$ and I-$E^{d/k}$ haplotypes.

Background:
MHC class II antibody, clone M5/114.15.2, recognizes the major histocompatibility complex (MHC) class II molecules I-A^b, I-A^d, I-A^q, I-E^d, and I-E^k. MHC class II is constitutively expressed on professional antigen-presenting cells (APCs), including macrophages/monocytes, dendritic cells (DCs), and B cells, and is induced on T cells upon activation[1]. MHC class II consists of two transmembrane proteins, a 35 kDa α (heavy) chain and 29 kDa β (light) chain[2]. The N-terminal α1 and β1 domains form the antigen-binding groove, which binds 13-25 aa peptides derived from exogenous antigens[3]. On APCs, MHC class II plays a critical role in the adaptive immune response by presenting phagocytosed antigens to helper CD4 T cells. The T cell receptor (TCR)/CD3 complex of CD4 T cells interacts with peptide-MHC class II, which induces CD4 T cell activation leading to the coordination and regulation of other effector cells. CD4 molecules also bind to MHC class II, which helps augment TCR signaling[4]. It has also been demonstrated that MHC class II express on activated T cells are capable of antigen presentation[5] and can transduce signals into T cells, enhancing T cell proliferation and activity[6].

Known Reactivity Species:
Mouse

Format:
R-phycoerythrin (PE)

Immunogen:
C57BL/6 Spleen Cells

Formulation
This R-phycoerythrin (R-PE) conjugate is formulated in 0.01 M phosphate buffered saline (150 mM NaCl) PBS pH 7.4, 1% BSA and 0.09% sodium azide as a preservative.

Products are for research use only. Not for use in diagnostic or therapeutic procedures.

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Storage and Stability
This R-phycoerythrin (R-PE) conjugate is stable when stored at 2-8°C. **Do not freeze.**

Applications
Applications and Recommended Usage (Quality Tested By Leinco):

FC The suggested concentration for this Clone M5/114.15.2 antibody for staining cells in flow cytometry is ≤ 0.25 µg per 10^6 cells in a volume of 100 µl. Titration of the reagent is recommended for optimal performance for each application.

Country of Origin
USA

References
1. Holling TM, et al. (2004) Hum Immunol. 65(4):282-90
2. Mitaksov V & Fremont DH. (2006) J Biol Chem. 281(15):10618-25
3. Wieczorek M, et al. (2017) Front Immunol. 8:292
4. Artyomov MN, et al. (2010) Proc Natl Acad Sci USA. 107(39):16916-16921
5. Barnaba V, et al. (1994) Eur J Immunol. 24(1):71-5
6. Di Rosa F, et al. (1993) Hum Immunol. 38(4):251-60

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