Leinco Technologies, Inc.
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Anti-Mouse MHC Class II (I-A) [Clone Y-3P] — Purified *in vivo* GOLD™ Functional Grade

Hybridoma Monoclonal Antibody

Product Information

Product No.:	H470
Clone:	Y-3P
Isotype:	Mouse Mouse IgG2a k

Product Description

Specificity:
Y-3P activity is directed against mouse MHC class II (I-A) glycoprotein antigens, including the haplotypes I-Ab, I-Af, I-Ap, I-Aq, I-Ar, I-As, I-Au, I-Av, and weakly I-Ak. Y-3P also reacts with the equivalent complexes in rats.

Antigen Distribution:
MHC class II molecules are constitutively expressed on professional antigen-presenting cells (APCs), including macrophages, monocytes, dendritic cells (DCs), and B cells, and are induced on T cells upon activation.

Background:
H-2, the murine major histocompatibility complex (MHC), is composed of a diverse group of antigens divided into class I and II proteins that function in immune response[1]. Class II molecules, also known as Ia antigens, regulate recognition of foreign antigens on the surfaces of antigen presenting cells and play a major role in the mixed lymphocyte response[2]. Mice have two class II isotypes, I-A and I-E, each of which is a glycoprotein composed of an α and β subunit. The N-terminal α1 and β1 domains of the MHC class II isotype form the antigen- binding groove, which binds 13-25 aa peptides derived from exogenous antigens[3].

On APCs, MHC class II molecules play 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]. Additionally, MHC class II expressed on activated T cells are capable of antigen presentation[5] and can transduce signals into T cells, enhancing T cell proliferation and activity[6].

Y-3P was generated by repeatedly immunizing primed mice with activated T cells over the course of a year[7]. Y-3P reacts with I-A subregion-controlled A α: A β complexes of all mouse strains except the

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responder strain H-2d. Y-3P is commonly used for in vivo blockade of TCR stimulation[8,9] and MHC class II blocking[10,11,12,13,14,15].

Known Reactivity Species:
Mouse

Format:
in vivo GOLD™, Purified in vivo Functional Grade

Immunogen:
BALB/c x C57BL/6 F1 mouse spleen cells

Formulation
This monoclonal antibody is aseptically packaged and formulated in 0.01 M phosphate buffered saline (150 mM NaCl) PBS pH 7.2 - 7.4 with no carrier protein, potassium, calcium or preservatives added. Due to inherent biochemical properties of antibodies, certain products may be prone to precipitation over time. Precipitation may be removed by aseptic centrifugation and/or filtration.

Purity
≥95% monomer by analytical SEC, >95% by SDS Page

Endotoxin
< 1.0 EU/mg as determined by the LAL method

Storage and Stability
Functional grade preclinical antibodies may be stored sterile as received at 2-8°C for up to one month. For longer term storage, aseptically aliquot in working volumes without diluting and store at ≤ -70°C. **Avoid Repeated Freeze Thaw Cycles.**

Product Preparation
Functional grade preclinical antibodies are manufactured in an animal free facility using only *in vitro* protein free cell culture techniques and are purified by a multi-step process including the use of protein A or G to assure extremely low levels of endotoxins, leachable protein A or aggregates.
Other Applications Reported in Literature:

B,
FC

Country of Origin
USA

References
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