Leinco Technologies, Inc.
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mAbMods™ Anti-Mouse CD279 (PD-1) Antibody

Fc Muted™

Monoclonal Antibody

Product Information

Product No.: P504

Clone: RMP1-14 mAbMods™ (LALA-PG)

Isotype: Mouse-Rat Chimeric Mouse IgG2a k

Storage: Sterile 2° to 8°C

Product Description

Specificity:
Anti-PD1 antibody (clone RMP1-14) recognizes an epitope on mouse PD-1.

Antigen Distribution:
PD-1 is expressed on a subset of CD4-CD8- thymocytes, and on activated T and B cells.

Background:
This anti-PD1 antibody is a recombinant chimeric version of the original clone RMP1-14 antibody. The variable domain sequences are identical to the original clone RMP1-14; however, the constant region sequences have been switched from rat IgG2a to mouse IgG2a. In this Fc Muted™ format, mutations (LALA-PG) have been introduced at crucial binding sites of the Fc domain with the FcR and C1q, reducing or eliminating Fc-mediated Antibody Dependent Cellular Phagocytosis (ADCP).

PD-1 is a 50-55 kD member of the B7 Ig superfamily. PD-1 is also a member of the extended CD28/CTLA-4 family of T cell regulators and is suspected to play a role in lymphocyte clonal selection and peripheral tolerance. The ligands of PD-1 are PD-L1 and PD-L2, and are also members of the B7 Ig superfamily. PD-1 and its ligands negatively regulate immune responses. PD-L1, or B7-Homolog 1, is a 40 kD type I transmembrane protein that has been reported to costimulate T cell growth and cytokine production. The interaction of PD-1 with its ligand PD-L1 is critical in the inhibition of T cell responses that include T cell proliferation and cytokine production. PD-L1 has increased expression in several cancers. Inhibition of the interaction between PD-1 and PD-L1 can serve as an immune checkpoint blockade by improving T-cell responses In vitro and mediating preclinical antitumor activity. Within the field of checkpoint inhibition, combination therapy using anti-PD1 in conjunction with anti-CTLA4 has significant therapeutic potential for tumor treatments. PD-L2 is a 25 kD type I transmembrane ligand of PD-1. Via PD-1, PD-L2 can serve as a co-inhibitor of T cell functions. Regulation of T cell responses, including enhanced T cell proliferation and cytokine production, can result from mAbs that block the PD-L2 and PD-1 interaction.

Known Reactivity Species:
Mouse

Format:
Purified No Carrier Protein

Immunogen:
Mouse PD-1 transfected BHK cells

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Formulation
This recombinant 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% by SDS Page, ≥95% monomer by analytical SEC

Endotoxin
<0.5 EU/mg as determined by the LAL method

Storage and Stability
Functional grade preclinical antibodies may be stored sterile as received at 2° to 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 in vitro 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.

Pathogen Testing
To protect mouse colonies from infection by pathogens and to assure that experimental preclinical data is not affected by such pathogens, all of Leinco's recombinant antibodies are tested and guaranteed to be negative for all pathogens in the IDEXX IMPACT I Mouse Profile.

Other Applications Reported in Literature:
B,
FA,
in vivo,
WB,
IHC

Country of Origin
USA

References
1) Schreiber, RD. et al. (2017) Cancer Immunol Res. 5(2):106-117
2) Honjo, T. et al. (1992) EMBO J. 11:3887

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