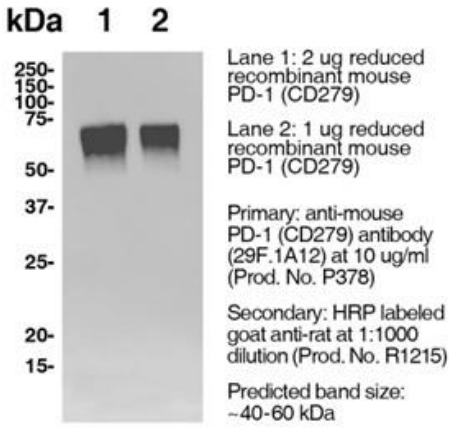
Leinco Technologies, Inc.
excellence in early discovery research™

Anti-Mouse CD279 (PD-1) (Clone 29F.1A12)

Purified *in vivo* PLATINUM™ Functional Grade Monoclonal Antibody



Product Information

Product No.: P378
Clone: 29F.1A12
RRID: AB_2831652
Isotype: Rat IgG2a
Storage: Sterile 2-8°C

Product Description

Specificity:
Clone 29F.1A12 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:
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 in vivo Functional Grade, in vivo PLATINUM™

Immunogen:
PD-1 cDNA followed by PD-1-Ig fusion protein

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
≥98% monomer by analytical SEC, >95% by SDS Page

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

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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 *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 Purified Functional PLATINUM™ antibodies are tested and guaranteed to be negative for all pathogens in the IDEXX IMPACT I Mouse Profile.

Applications
Applications and Recommended Usage (Quality Tested By Leinco):
FC
WB
Other Applications Reported in Literature:
CyTOF®
PhenoCycler-Fusion (CODEX)®
IHC FF
B

Country of Origin
USA

References
1.) Ardolino, M. *et al.* (2018) *J Clin Invest.* **128**(10):4654-4668. PubMed
2.) Schreiber, RD. *et al.* (2017) *Cancer Immunol Res.* **5**(2):106-117.
3.) Honjo, T. *et al.* (1992) *EMBO J.* **11**:3887.
4.) Wurster S. *et al.* (2020) *The Journal of Infectious Diseases* **222**(6):1989–994 Journal Link
5.) Lo, R. *et al.* (2021) *Cancer Cell* **39**(10):1375-1387.e6 Journal Link