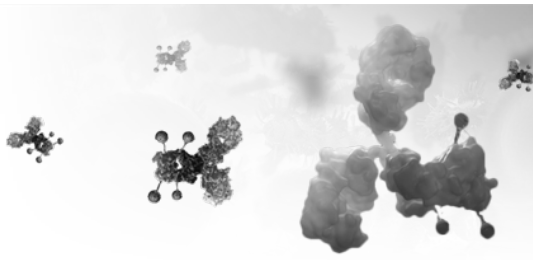

# Chimeric Mouse Anti-Mouse PD-1 (CD279) Monoclonal antibody, clone RMP1-14 (CABT-L4430C)

This product is for research use only and is not intended for diagnostic use.

## PRODUCT INFORMATION

| | |
|---|---|
| **Target** | PDCD1 |
| **Immunogen** | Syrian Hamster BKH cells transfected with mouse PD-1 cDNA |
| **Isotype** | IgG2a, κ |
| **Source/Host** | Mouse |
| **Species Reactivity** | Mouse |
| **Clone** | RMP1-14 |
| **Purification** | ProteinG,>95% purity determined by SDS-PAGE |
| **Conjugate** | Unconjugated |
| **Applications** | BL |
| **Molecular Weight** | 150 kDa |
| **Preparation** | Purified from CHO cell supernatant in an animal free facility |
| **Positive Control** | RecombiMAb mouse IgG2a (D265A) isotype control, anti-hen egg lysozyme |
| **Format** | Purified, Liquid |
| **Concentration** | Lot Specific* (generally 4 to 11 mg/ml) |
| **Size** | 1mg, 5mg, 25mg, 50mg,100mg |

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| | |
|---|---|
| **Buffer** | PBS, pH 7.0. Contains no stabilizers or preservatives. |
| **Preservative** | None |
| **Storage** | Store at the stock concentration at 4°C. Do not freeze. |
| **Ship** | Wet ice |

# BACKGROUND

**Introduction**

The CABT-L4430C is a chimeric version of the original antibody. The variable domain sequences are identical to the original antibody but the constant region sequences have been switched from rat IgG2a to mouse IgG2a. The CABT-L4430C antibody also contains a D265A mutation in the Fc fragment rendering it unable to bind to endogenous Fcγ receptors. CABT-L4430C reacts with mouse PD-1 (programmed death-1) also known as CD279. PD-1 is a 50-55 kDa cell surface receptor encoded by the Pdcd1 gene that belongs to the CD28 family of the Ig superfamily. PD-1 is transiently expressed on CD4 and CD8 thymocytes as well as activated T and B lymphocytes and myeloid cells. PD-1 expression declines after successful elimination of antigen. Additionally, Pdcd1 mRNA is expressed in developing B lymphocytes during the pro-B-cell stage. PD-1's structure includes a ITIM (immunoreceptor tyrosine-based inhibitory motif) suggesting that PD-1 negatively regulates TCR signals. PD-1 signals via binding its two ligands, PD-L1 and PD-L2 both members of the B7 family. Upon ligand binding, PD-1 signaling inhibits T-cell activation, leading to reduced proliferation, cytokine production, and T-cell death. Additionally, PD-1 is known to play key roles in peripheral tolerance and prevention of autoimmune disease in mice as PD-1 knockout animals show dilated cardiomyopathy, splenomegaly, and loss of peripheral tolerance. Induced PD-L1 expression is common in many tumors including squamous cell carcinoma, colon adenocarcinoma, and breast adenocarcinoma. PD-L1 overexpression results in increased resistance of tumor cells to CD8 T cell mediated lysis. In mouse models of melanoma, tumor growth can be transiently arrested via treatment with antibodies which block the interaction between PD-L1 and its receptor PD-1. For these reasons anti-PD-1 mediated immunotherapies are currently being explored as cancer treatments.

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