

## Anti-Mouse CD279 (PD-1) PE

Catalogue Number : 31812-60

RUO: For Research Use Only. Not for use in diagnostic procedures.

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### Product Information

**Clone:** J43.1

**Format/Conjugate:** PE

**Concentration:** 0.2 mg/mL

**Reactivity:** Mouse

**Laser:** Blue (488nm), Yellow/Green (532-561nm)

**Peak Emission:** 578nm

**Peak Excitation:** 496nm

**Filter:** 585/40

**Brightness (1=dim,5=brightest):** 5

**Isotype:** Armenian Hamster IgG

**Formulation:** Phosphate-buffered aqueous solution, ≤0.09% Sodium azide, may contain carrier protein/stabilizer, pH7.2.

**Storage:** Product should be kept at 2-8°C and protected from prolonged exposure to light.

**Applications:** FC

### Description

The J43.1 monoclonal antibody specifically reacts with mouse CD279, also known as PD-1 (programmed death-1), a 50-55 kDa glycoprotein of the Ig superfamily. The PD-1 ligands, PD-L1 (B7-H1) and PD-L2 (B7-H2) are members of the B7 family. Pd-1 contains an Immunoreceptor Tyrosine-based Inhibitory Motif (ITIM) and influences the peripheral tolerances and autoimmune diseases in mice. PD-1 is transiently expressed on CD4/CD8 thymocytes, it is upregulated in apoptotic cells, and it is expressed by activated myeloid and T and B cells.

The binding of PD-1 to its ligands is blocked by the J43 antibody, which also enhances contact hypersensitivity and exacerbates acute Graft-versus-host disease, Experimental autoimmune encephalomyelitis and NOD diabetes. PD-1 seems to downregulate the immune response, as the development of splenomegaly and breakdown of peripheral tolerance in PD-1 deficient mice suggests.

### Preparation & Storage

The product should be stored undiluted at 4°C and should be protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified utilizing affinity chromatography and unreacted dye was removed from the product.

### Application Notes

The antibody has been analyzed for quality through the flow cytometric analysis of the relevant cell type. For flow cytometric staining, the suggested use of this reagent is ≤0.5 ug per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.

### References

1. Nishimura, H., Agata, Y., Kawasaki, A., Sato, M., Imamura, S., Minato, N., ... ; Honjo, T. (1996). Developmentally regulated expression of the PD-1 protein on the surface of double-negative (CD4;CD8<sup>-</sup>) thymocytes. *International immunology*,;8(5), 773-780.
2. Salama, A. D., Chitnis, T., Imitola, J., Ansari, M. J. I., Akiba, H., Tushima, F., ... ; Khoury, S. J. (2003). Critical role of the programmed death-1 (PD-1) pathway in regulation of experimental autoimmune encephalomyelitis. *The Journal of experimental medicine*,;198(1), 71-78.
3. Carreno, B. M., ; Collins, M. (2002). The B7 family of ligands and its receptors: new pathways for costimulation and inhibition of immune responses. *Annual review of immunology*,;20(1), 29-53.