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Technical Data Sheet

Anti-Mouse CD279 (PD-1) FITC

Catalogue Number : 31812-50

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

Product Information

Clone: J43.1
Format/Conjugate: FITC
Concentration: 0.5 mg/mL
Reactivity: Mouse
Laser: Blue (488nm)
Peak Emission: 520nm
Peak Excitation: 494nm
Filter: 530/30
Brightness (1=dim,5=brightest): 3
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 ≤1.0 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;) 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.

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