Technical Data Sheet

PE Hamster Anti-Mouse CD279

Product Information

Material Number:	**561788**
Alternate Name:	Ly101; PD-1; Pdc1; Pdcd1; mPD-1; programmed cell death 1 protein; programmed cell death protein 1; protein PD-1
Size:	25 µg
Concentration:	0.2 mg/ml
Clone:	J43
Immunogen:	Syrian Hamster kidney cell line BKH transfected with Pdcd1 cDNA
Isotype:	Armenian Hamster IgG2, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The J43 monoclonal antibody specifically recognizes CD279 which is also known as PD-1 (programmed death-1). CD279 is a 50-55-kDa glycoprotein encoded by the *Pdcd1* gene of the CD28 family of the Ig superfamily. The expression of *Pdcd1* mRNA and PD-1 protein is tightly regulated. PD-1 is transiently expressed on CD4-CD8 thymocytes, it is upregulated on some cell lines upon induction of apoptosis, it is induced on thymocytes and splenic T and B lymphocytes after stimulation through their antigen receptors, and it is induced on activated myeloid cells. In addition, *Pdcd1* mRNA is transiently expressed in developing B lymphocytes at the pro-B-cell stage. The presence of an ITIM (*I*mmunoreceptor *T*yrosine-based *I*nhibitory *M*otif) on PD-1's intracytoplasmic region and the development of splenomegaly and breakdown of peripheral tolerance in PD-1[-/-] mice suggest that PD-1 is involved in the negative regulation of immune responses. The PD-1 ligands, B7-H1 (also known as PD-L1, CD274) and B7-DC (PD-L2, CD273), are members of the B7 family of the Ig superfamily. The J43 antibody blocks the binding of PD-1 to its two ligands.

Preparation and Storage

Store undiluted at 4°C.
The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 mL	(none)
550085	PE Hamster IgG2, κ Isotype Control	0.1 mg	B81-3
554657	Stain Buffer (BSA)	500 mL	(none)
551892	PE Hamster Anti-Mouse CD279	0.1 mg	J43

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Although hamster immunoglobulin isotypes have not been well defined, BD Biosciences Pharmingen has grouped Armenian and Syrian hamster IgG monoclonal antibodies according to their reactivity with a panel of mouse anti-hamster IgG mAbs. A table of the hamster IgG groups, Reactivity of Mouse Anti-Hamster Ig mAbs, may be viewed at http://www.bdbiosciences.com/documents/hamster_chart_11x17.pdf.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.

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6. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

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