Technical Data Sheet

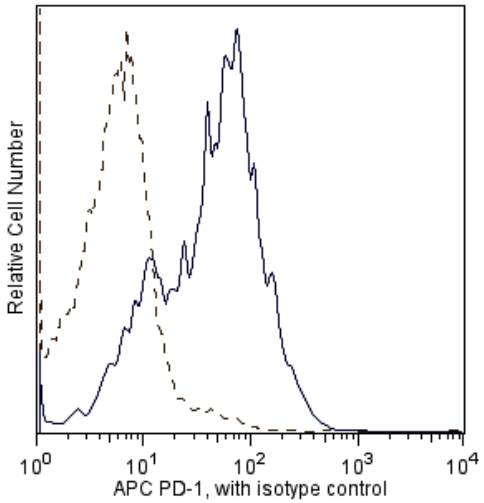
APC Mouse anti-Human CD279

Product Information

Material Number:	**558694**
Alternate Name:	PD-1
Size:	100 tests
Vol. per Test:	20 µl
Clone:	MIH4
Immunogen:	Human PD-1 Transfected Cell Line
Isotype:	Mouse IgG1, κ
Reactivity:	Human
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

Reacts with the program death 1 (PD-1) receptor CD279, a member of the Ig superfamily. CD279 is an immunoregulatory receptor expressed on activated T cells, B cells and myeloid cells. Mice deficient in CD2791 show a breakdown of peripheral tolerance and manifest multiple autoimmune symptoms. It contains an immunoreceptor tyrosine-based inhibitory motif (ITIM) in the cytoplasmic region. PD-L1 and PD-L2 are ligands of CD279 and are members of the B7 gene family. Interaction of CD279:PD-Ligands results in inhibition of T cell proliferation and cytokine secretion. Reports suggest that the B7/CTLA-4 pathway functions primarily to attenuate, limit, and/or terminate naïve T-cell activation in secondary lymphoid organs. The PD-ligand:CD279 pathway, on the other hand, may primarily attenuate, limit, and/or terminate T-, B-, and myeloid cell activation/effector function at sites of inflammation in the periphery.



Flow cytometric analysis of APC-conjugated anti-human CD279 (PD-1) on human periferal blood lymphocytes (PBMC).
Phytohemagglutinin (PHA) activated human PBMC were stained with either APC anti-CD279 (clone MIH4, Cat. No. 558694, solid line) or an APC-conjugated mouse IgG1 isotype control (Cat. No. 555751/554681, dashed line), and analyzed by flow cytometry. Flow cytometry was performed on a BD FACSCalibur™ System and the histograms were derived from the gated events based on light scattering characteristics of viable PBMC.

Preparation and Storage

The antibody was conjugated to APC under optimum conditions, and unconjugated antibody and free APC were removed.
The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
555751	APC Mouse IgG1, κ Isotype Control	100 tests	MOPC-21

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Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 10^6 cells in a 100-µl experimental sample (a test).
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
4. 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.
5. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Bennett F, Luxenberg D, Ling V, et al. Program death-1 engagement upon TCR activation has distinct effects on costimulation and cytokine-driven proliferation: attenuation of ICOS, IL-4, and IL-21, but not CD28, IL-7, and IL-15 responses. *J Immunol.* 2003; 170(2):711-718. (Biology)

Carter L, Fouser LA, Jussif J, et al. PD-1:PD-L inhibitory pathway affects both CD4(+) and CD8(+) T cells and is overcome by IL-2. *Eur J Immunol.* 2002; 32:634-643. (Biology)

Freeman GJ, Long AJ, Iwai Y, et al. Engagement of PD-1 immunoinhibitory receptor by a novel B7 family member leads to negative regulation of lymphocyte activation. *J Exp Med.* 2000; 192:1027-1034. (Biology)

Kanai T, Totsuka T, Uraushihara K, et al. Blockade of B7-H1 suppresses the development of chronic intestinal inflammation. *J Immunol.* 2003; 171(8):4156-4163. (Immunogen)

Latchman Y, Wood CR, Chernova T, et al. PD-L2 is a second ligand for PD-1 and inhibits T cell activation. *Nat Immunol.* 2001; 2(3):261-268. (Biology)

Nishimura H, Minato N, Nakano T, Honjo T. Immunological studies on PD-1 deficient mice: implication of PD-1 as a negative regulator for B cell responses. *Int Immunol.* 1998; 10(10):1563-1572. (Biology)