Technical Data Sheet

BV421 Mouse Anti-Human CD279 (PD-1)

Product Information

562516
hPD-1; PD1; PDCD1; Programmed cell death 1; SLEB2
50 tests
5 µl
EH12.1 (also known as EH12)
Human PD-1 Recombinant Protein
Mouse IgG1, ĸ
QC Testing: Human
Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The EH12.1 monoclonal antibody specifically binds to CD279. CD279 is an immunoregulatory receptor that is expressed on activated T cells, B cells and myeloid cells and contains an immunoreceptor tyrosine-based inhibitory motif (ITIM) in the cytoplasmic region. Mice deficient in CD279 show a breakdown of peripheral tolerance and manifest multiple autoimmune symptoms. 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.

The antibody was conjugated to BD HorizonTM BV421 which is part of the BD HorizonTM Brilliant VioletTM family of dyes. With an Ex Max of 407-nm and Em Max at 421-nm, BD HorizonTM BV421 can be excited by the violet laser and detected in the standard Pacific BlueTM filter set (eg, 450/50-nm filter). BD Horizon™ BV421 conjugates are very bright, often exhibiting a 10 fold improvement in brightness compared to Pacific Blue[™] conjugates.



Multicolor flow cytometric analysis of CD279 expression on human peripheral blood lymphocytes. Human whole blood was stained with the BD Horizon™ BV421 Mouse Anti-Human CD279 (PD-1) antibody (Cat. No. 562516) and APC Mouse Anti-Human CD3 antibody (Cat. No. 561810/555335). The erythrocytes were lysed with BD Pharm Lyse™ Lysing Buffer (Cat. No. 555899). The two-color flow cvtometric contour plot shows the correlated expression of CD3 versus CD279 for gated events with the forward and side light-scatter characteristics of viable lymphocytes. Quadrant markers were placed based upon the corresponding fluorescent immunoglobulin isotype controls (data not shown). Flow cytometry was performed using a BD FACSCanto™ II Flow Cytometer System.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with BD HorizonTM BV421 under optimum conditions, and unconjugated antibody and free BD HorizonTM BV421 were removed.

Application Notes

Application						
Flow cytometry Routinely Tested						
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Suggested Companion Products

Catalog Number	Name	Size	Clone	
562438	BV421 Mouse IgG1, k Isotype Control	50 µg	X40	
555899	Lysing Buffer	100 ml	(none)	
554656	Stain Buffer (FBS)	500 ml	(none)	
561810	APC Mouse Anti-Human CD3	25 tests	UCHT1	
555335	APC Mouse Anti-Human CD3	100 tests	UCHT1	
555751	APC Mouse IgG1, κ Isotype Control	100 tests	MOPC-21	

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).

- An isotype control should be used at the same concentration as the antibody of interest. 2.
- Brilliant Violet[™] 421 is a trademark of Sirigen. 3.
- 4 Pacific Blue[™] is a trademark of Molecular Probes, Inc., Eugene, OR.
- Source of all serum proteins is from USDA inspected abattoirs located in the United States. 5.
- Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before 6. discarding to avoid accumulation of potentially explosive deposits in plumbing.
- 7. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
- Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols. 8.

References

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