**Product Information**

**Material Number:** 563789

**Alternate Name:** PD1; hPD-1; hPD-l; PDCD1; PDC1; Programmed cell death 1; SLEB2; hSLE1

**Size:** 50 Tests

**Vol. per Test:** 5 µl

**Clone:** EH12.1 (also known as EH12)

**Immunogen:** Human PD-1 Recombinant Protein

**Isotype:** Mouse IgG1, κ

**Reactivity:** QC Testing: Human

**Storage Buffer:** Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

**Description**

The EH12.1 monoclonal antibody specifically binds to CD279 which is also known as Programmed cell death 1 (PD1). CD279 is an immunoregulatory receptor expressed on activated T cells, B cells, and myeloid cells. It 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 members of the B7 gene family. CD279:PD-Ligands interaction inhibits T cell proliferation and cytokine secretion. Reports suggest that the B7/CTLA-4 pathway primarily attenuates, limits, and/or terminates 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/effecter function at sites of inflammation in the periphery.

The antibody was conjugated to BD Horizon BV786 which is part of the BD Horizon Brilliant™ Violet family of dyes. This dye is a tandem fluorochrome of BD Horizon BV421 with an Ex Max of 405-nm and an acceptor dye with an Em Max at 786-nm. BD Horizon BV786 can be excited by the violet laser and detected in a filter used to detect Cy™7-like dyes (eg, 780/60-nm filter).

**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 Horizon™ BV786 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV786 were removed.

**Two-color flow cytometric analysis of CD279 expression on human peripheral blood lymphocytes.** Human whole blood was stained with FITC Mouse Anti-Human CD3 antibody (Cat. No. 555332/561806/561807) and either BD Horizon™ BV786 Mouse IgG1, κ Isotype Control (Cat. No. 563330; Left Panel) or BD Horizon™ BV786 Mouse Anti-Human CD279 (PD-1) antibody (Cat. No. 563789; Right Panel). The erythrocytes were lysed with BD FACS™ Lysing Solution (Cat. No. 349202). The two-color flow cytometric dot plots show the correlated expression of CD279 (or Ig Isotype control staining) versus CD3 for gated events with the forward and side light-scatter characteristics of intact lymphocytes. Flow cytometric analysis was performed using a BD LSR™ II Flow Cytometry System.

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Recommended Assay Procedure:
For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes are used in the same experiment. Fluorescent dye interactions may cause staining artifacts which may affect data interpretation. The BD Horizon Brilliant Stain Buffer was designed to minimize these interactions. More information can be found in the Technical Data Sheet of the BD Horizon Brilliant Stain Buffer (Cat. No. 563794/566349) or the BD Horizon Brilliant Stain Buffer Plus (Cat. No. 566385).

Suggested Companion Products

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<th>Name</th>
<th>Size</th>
<th>Clone</th>
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<tr>
<td>563330</td>
<td>BV786 Mouse IgG1, k Isotype Control</td>
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<td>X40</td>
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<td>FITC Mouse Anti-Human CD3</td>
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<td>566349</td>
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<tr>
<td>566385</td>
<td>Brilliant Stain Buffer Plus</td>
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Product Notices
1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use $1 \times 10^6$ cells in a 100-µl experimental sample (a test).
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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdsciences.com/colors.
6. BD Horizon Brilliant Violet 786 is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,227,187; 8,455,613; 8,575,303; 8,354,239.
7. BD Horizon Brilliant Stain Buffer is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,575,303; 8,354,239.
8. Cy is a trademark of GE Healthcare.

References