**Product Information**

**Material Number:** 565200

**Alternate Name:** CD365; TIM; TIMD1; TIMD-1; HAVCR1; HAVCR-1; HAVCR; KIM1; KIM-1

**Size:** 50 Tests

**Vol. per Test:** 5 µl

**Clone:** 1D12

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

**Isotype:** Mouse (BALB/c) IgG1, κ

**Reactivity:**

**Workshop:** X 10-67

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

**Description**

The 1D12 monoclonal antibody specifically binds to CD365, the T-cell immunoglobulin mucin receptor 1 (TIM-1). TIM-1 is expressed on kidney epithelial cells, T cells, and some hematopoietic and non-hematopoietic cells. CD365 (TIM-1) is a type 1 transmembrane glycoprotein that serves as a receptor for hepatitis A virus and is encoded by the HAVCR1 (Hepatitis A virus cellular receptor 1) gene. TIM-1 also serves as a receptor for phosphatidylserine which is exposed on the surface of apoptotic cells. TIM-1 can reportedly mediate the uptake of apoptotic cells through the recognition of phosphatidylserine and thus help maintain tissue homeostasis and self-tolerance. TIM-1 is likewise known as Kidney injury molecule 1 (KIM-1). It is highly expressed by cancerous kidneys, and upregulated in the proximal tubular epithelium and shed into the urine during acute and chronic kidney injury. CD365 (TIM-1) also functions as a costimulatory molecule for immune cells. It is expressed by activated CD4+ T cells and regulates the effector functions (eg, enhanced cytokine production) and survival of differentiated T cells, including those mediating Th2-like immune responses. Other ligands have been described for TIM-1 including TIM-4 and LMR5 (also known as CD300b) which are expressed by myeloid cells. With respect to disease associations, the HAVCR1 gene has been linked to asthma, allergy, and some autoimmune diseases.

The antibody was conjugated to BD Horizon BB515 which was developed exclusively by BD Biosciences. With an excitation max of 490 nm and an emission max of 515 nm, BD Horizon BB515 can be excited by the 488 nm laser and detected in a standard FITC set (e.g. 530/30-nm filter). This dye provides a much brighter alternative to FITC with less spillover into the PE detector.

**Flow cytometric analysis of CD365 (TIM-1) expression on human 769-P cells.** Cells from the human Jurkat (Acute T cell leukemia, ATCC TIB-152; Left Panel) and 769-P (Renal cell adenocarcinoma, ATCC CRL-1933; Right Panel) cell lines were stained with either BD Horizon™ BB515 Mouse IgG1 κ Isotype Control (Cat. No. 564416; dashed line histograms) or BD Horizon BB515 Mouse Anti-Human CD365 (TIM-1) antibody (Cat. No. 565200; solid line histogram). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of viable cells. Flow cytometric analysis was performed using a BD LSRFortessa™ Cell Analyzer 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 Horizon™ BB515 under optimum conditions and unconjugated antibody was removed.

Application Notes

Application

| Flow cytometry | Routinely Tested |

Recommended Assay Procedure:
For optimal results, it is recommended to perform 2 washes after staining with antibodies. Cells may be prepared, stained with antibodies and washed twice with wash buffer per established protocols for immunofluorescent staining, prior to acquisition on a flow cytometer. Performing fewer than the recommended wash steps may lead to increased spread of the negative population.

Suggested Companion Products

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
</thead>
<tbody>
<tr>
<td>564416</td>
<td>BB515 Mouse IgG1, κ Isotype Control</td>
<td>100 µg</td>
<td>X40</td>
</tr>
<tr>
<td>554656</td>
<td>Stain Buffer (FBS)</td>
<td>500 mL</td>
<td>(none)</td>
</tr>
<tr>
<td>554657</td>
<td>Stain Buffer (BSA)</td>
<td>500 mL</td>
<td>(none)</td>
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<tr>
<td>563794</td>
<td>Brilliant Stain Buffer</td>
<td>100 Tests</td>
<td>(none)</td>
</tr>
<tr>
<td>566018</td>
<td>BB515 Mouse Anti-Human CD365 (TIM-1)</td>
<td>25 Tests</td>
<td>1D12</td>
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</tbody>
</table>

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. An isotype control should be used at the same concentration as the antibody of interest.
3. The manufacture, use, sale, offer for sale, or import of this product is subject to one or more patents or pending applications. This product, and only in the amount purchased by buyer, may be used solely for buyer’s own internal research, in a manner consistent with the accompanying product literature. No other right to use, sell or otherwise transfer (a) this product, or (b) its components is hereby granted expressly, by implication or by estoppel. Diagnostic uses require a separate license.
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. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.

References

Binne LL, Scott ML, Rennert PD. Human TIM-1 associates with the TCR complex and up-regulates T cell activation signals. J Immunol. 2007; 178(7):4342-4350. (Biology)