

Technical Data Sheet

BV605 Mouse Anti-Human CD365 (TIM-1)

Product Information

Material Number:	742541
Size:	50 µg
Clone:	1D12
Alternative Name:	CD365; TIM1; TIM; TIMD1; TIMD-1; HAVCR1; HAVCR-1; HAVCR; KIM1; KIM-1
Reactivity:	Human (Tested in Development)
Isotype:	Mouse BALB/c IgG1, κ
Immunogen:	Human TIM-1 Recombinant Protein
Application:	Flow cytometry (Qualified)
Concentration:	0.2 mg/ml
Workshop No.:	X 10-67
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

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 LMIR5 (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.

This antibody is conjugated to BD Horizon™ BV605 which is part of the BD Horizon Brilliant™ Violet family of dyes. With an Ex Max of 407-nm and Em Max of 602-nm, BD Horizon BV605 can be excited by a violet laser and detected with a standard 610/20-nm filter set. BD Horizon BV605 is a tandem fluorochrome of BD Horizon BV421 and an acceptor dye with an Em max at 605-nm. Due to the excitation of the acceptor dye by the green (532 nm) and yellow-green (561 nm) lasers, there will be significant spillover into the PE and BD Horizon PE-CF594 detectors off the green or yellow-green lasers. BD Horizon BV605 conjugates are very bright, often exhibiting brightness equivalent to PE conjugates and can be used as a third color off of the violet laser.

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 BV605 under optimal conditions that minimize unconjugated dye and antibody.

Recommended Assay Procedure

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes (including BD OptiBuild Brilliant reagents) 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).

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 mL	
554657	Stain Buffer (BSA)	500 mL	
563794	Brilliant Stain Buffer	100 Tests	
555899	Lysing Buffer	100 mL	
349202	Lysing Solution 10X Concentrate	100 NA	
564219	Human BD Fc Block™	50 mg	
562652	BV605 Mouse IgG1, κ Isotype Control	50 µg	X40

Product Notices

1. This antibody was developed for use in flow cytometry.
2. The production process underwent stringent testing and validation to assure that it generates a high-quality conjugate with consistent performance and specific binding activity. However, verification testing has not been performed on all conjugate lots.
3. Researchers should determine the optimal concentration of this reagent for their individual applications.
4. An isotype control should be used at the same concentration as the antibody of interest.
5. 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.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. Please refer to www.bdbiosciences.com/us/s/resources for technical protocols.
8. 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.
9. BD Horizon Brilliant Violet 605 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.

References

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