

Technical Data Sheet

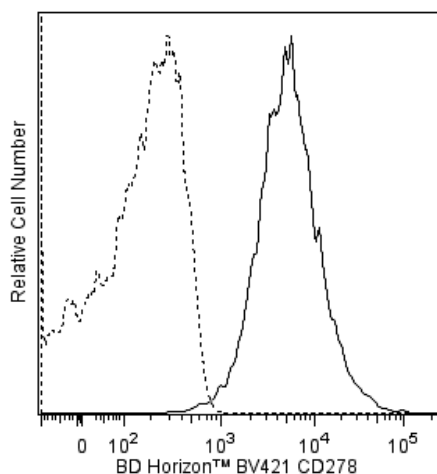
BV421 Mouse Anti-Human CD278**Product Information**

Material Number:	562901
Alternate Name:	ICOS; DX-29; H4; Inducible T-cell costimulator; AILIM; CVID1
Size:	50 tests
Vol. per Test:	5 µl
Clone:	DX29
Immunogen:	Activated human T cells
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The DX29 monoclonal antibody specifically binds to human CD278 which is also known as inducible costimulator (ICOS) and inducible T-cell co-stimulator. ICOS is a homodimeric type I transmembrane glycoprotein with an approximate molecular weight of 50-60 kDa. It is a member of the CD28 family and is highly expressed on activated T cells. CD278 is the receptor for ICOS-ligand (also known as CD275, B7-H2, B7RP-1, and LICOS). Like CD28, ICOS can provide a costimulatory signal for T cell activation, proliferation and cytokine production. It is not expressed on resting or activated B cells, monocytes, NK cells, granulocytes, dendritic cells or platelets. Unlike the constitutively expressed CD28, ICOS is de novo expressed upon cellular activation. Reports describe similarities between CD28 and ICOS in T cell activation, such as the costimulation of cytokine production. However, it has been suggested that ICOS may play a greater role in IL-10 production. In the presence of IL-10, purified recombinant human ICOS protein significantly increased in vitro B cell growth stimulated by pokeweed mitogen (PWM) and enhanced production of IgG.

The antibody was conjugated to BD Horizon™ BV421 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. With an Ex Max of 407-nm and Em Max at 421-nm, BD Horizon™ BV421 can be excited by the violet laser and detected in the standard Pacific Blue™ 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.

**Flow cytometric analysis of CD278 expression on stimulated human peripheral blood lymphocytes.**

Phytohemagglutinin-stimulated (3 days) peripheral blood mononuclear cells were stained with either BD Horizon™ BV421 Mouse Anti-Human CD278 antibody (Cat. No. 562901; solid line histogram) or with a BD Horizon™ BV421 Mouse IgG1 κ Isotype Control (Cat. No. 562438; dashed line histogram). The fluorescence histograms were derived from events with the forward and side light-scatter characteristics of viable lymphoblast cells. Flow cytometric analysis was performed using a BD™ LSR II Flow Cytometer System.

Preparation and Storage

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.

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

Application Notes**Application**

Flow cytometry

Routinely Tested

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
562438	BV421 Mouse IgG1, k Isotype Control	50 µg	X40

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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. Please refer to www.bdbiosciences.com/pharming/en/protocols for technical protocols.
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. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
8. Brilliant Violet™ 421 is a trademark of Sirigen.

References

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