Technical Data Sheet

APC-R700 Mouse Anti-Human CD69

Product Information

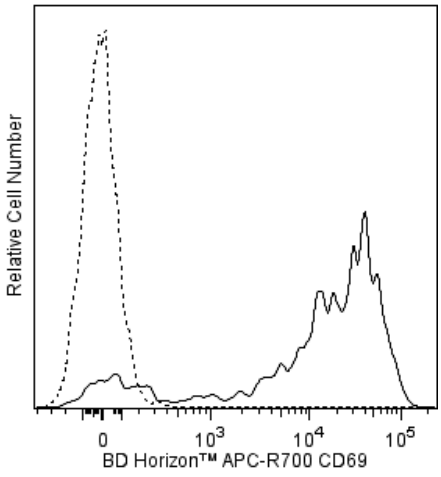
Material Number:	**565155**
Alternate Name:	AIM; CLEC2C; EA1; GP32/28; Leu23; MLR-3; VEA; BL-AC/P26
Size:	25 Tests
Vol. per Test:	5 µl
Clone:	FN50 (also known as FN 50)
Immunogen:	Anti-µ stimulated human B lymphocytes
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human Tested in Development: Rhesus, Cynomolgus, Baboon
Workshop:	IV A91 (A091)
Storage Buffer:	Aqueous buffered solution containing BSA, protein stabilizer, glycerol and ≤0.09% sodium azide.

Description

The FN50 monoclonal antibody specifically binds to human CD69. CD69 is also known as activation-induced molecule (AIM), early activation antigen (EA-1), very early activation antigen (VEA), C-type lectin domain family 2 member C (CLEC2C), MLR-3, GP32/28 and Leu-23. CD69 is a transmembrane type II homodimer receptor. CD69 is comprised of disulfide-linked, differentially glycosylated core protein subunits that are approximately 28 and 34 kDa in size. Each subunit contains a C-type lectin domain. CD69 is expressed on activated T, B, and natural killer (NK) lymphocytes, thymocytes, neutrophils, eosinophils and platelets. In normal peripheral blood, a small and variable percentage of lymphocytes typically express detectable membrane CD69 antigen. Upon activation, CD69 antigen expression increases on lymphocytes. Peak CD69 expression generally occurs within 18 hours of activation, preceding the appearance of HLA-DR, IL-2Rα (CD25) and transferrin receptor (CD71). CD69 is highly expressed on the bright CD3+ subset of thymocytes. FN50 monoclonal antibody labels NK cells and most lymphocytes of the follicular mantle and perifollicular/interfollicular zone as well as germinal center T cells of lymph nodes and tonsils. Studies indicate that CD69 serves as a signaling receptor in the activation of a variety of cell types.

Clone FN50 reacts with the human form of the 28/34 kDa dimeric glycoprotein expressed early during activation of lymphocytes, monocytes, and platelets. It also cross-reacts with a subset of peripheral blood mononuclear cells (lymphocytes and monocytes) of rhesus and cynomolgus macaque monkeys. The distribution on lymphocytes is similar to that observed with human peripheral blood lymphocytes with the majority of the cells demonstrating an increase in FN50 positivity following overnight incubation with phorbol myristrate acetate (PMA).

This antibody was conjugated to BD Horizon APC-R700, which has been developed exclusively by BD Biosciences as a better alternative to Alexa Fluor® 700. APC-R700 excites and emits at similar wavelengths to Alexa Fluor® 700 yet exhibits significantly improved brightness. This dye can be excited by the red laser and detected with the same filter set as Alexa Fluor® (eg, 730/45-nm filter).



Flow cytometric analysis of CD69 expressed on stimulated peripheral blood mononuclear cells. *Human PBMC were stimulated for 24 hours with Phytohemagglutinin. The cells were then stained with either BD Horizon™ APC-R700 Mouse IgG1, κ Isotype control (Cat. No. 564974; dashed line histogram) or BD Horizon APC-R700 Mouse Anti-Human CD69 antibody (Cat. No. 565154/565155; solid line histogram). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of viable activated lymphocytes. Flow cytometric analysis was performed using a BD™ LSR II Flow Cytometer System.*

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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 APC-R700 under optimum conditions, and unconjugated antibody and free BD Horizon APC-R700 were removed.

Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 mL	(none)
554657	Stain Buffer (BSA)	500 mL	(none)
564974	APC-R700 Mouse IgG1, κ Isotype Control	0.1 mg	X40
565154	APC-R700 Mouse Anti-Human CD69	100 Tests	FN50

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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
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. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. Species testing during development may have been performed with a different format of the same clone. Selected applications have been tested for cross-reactivity.
8. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

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