Technical Data Sheet

Purified Mouse Anti-Human CD69

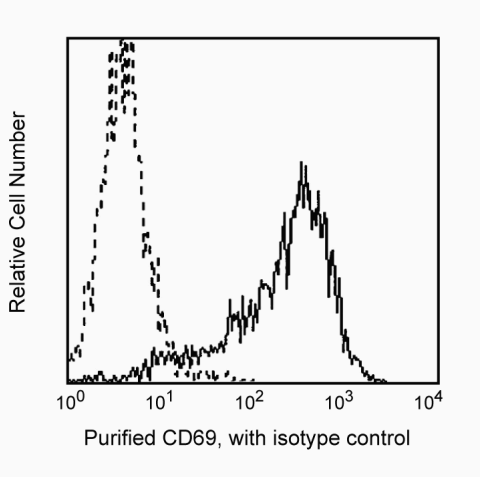
Product Information

Material Number:	**555529**
Alternate Name:	AIM; CLEC2C; EA1; GP32/28; Leu23; MLR-3; VEA; BL-AC/P26
Size:	0.1 mg
Concentration:	0.5 mg/ml
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 ≤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).



Flow cytometric analysis of CD69 expressed on stimulated peripheral blood lymphocytes. *Human PBMC were stimulated for 24 hours with Phytohemagglutinin (PHA; Sigma L-1668). The cells were then stained with either Purified Mouse IgG1, κ Isotype control (Cat. No. 555746; dashed line histogram) or Purified Mouse Anti-Human CD69 antibody (Cat. No. 555529; solid line histogram), followed by FITC Goat Anti-Mouse IgG/IgM (Cat. No. 555988). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of viable activated lymphocytes. Flow cytometry was performed on a BD FACScan™ system.*

Preparation and Storage

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

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Application Notes

Application

Flow cytometry	Routinely Tested
Immunohistochemistry-frozen	Tested During Development

Suggested Companion Products

Catalog Number	Name	Size	Clone
555746	Purified Mouse IgG1, κ Isotype Control	0.1 mg	MOPC-21
555988	FITC Goat Anti-Mouse IgG/IgM	0.5 mg	Polyclonal
554656	Stain Buffer (FBS)	500 mL	(none)
554657	Stain Buffer (BSA)	500 mL	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
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. Species testing during development may have been performed with a different format of the same clone. Selected applications have been tested for cross-reactivity.
5. Sodium azide is a reversible inhibitor of oxidative metabolism; therefore, antibody preparations containing this preservative agent must not be used in cell cultures nor injected into animals. Sodium azide may be removed by washing stained cells or plate-bound antibody or dialyzing soluble antibody in sodium azide-free buffer. Since endotoxin may also affect the results of functional studies, we recommend the NA/LE (No Azide/Low Endotoxin) antibody format, if available, for in vitro and in vivo use.
6. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Knapp W. W. Knapp .. et al., ed. *Leucocyte typing IV : white cell differentiation antigens.* Oxford New York: Oxford University Press; 1989:1-1182. (Clone-specific)
Schlossman SF. Stuart F. Schlossman .. et al., ed. *Leucocyte typing V : white cell differentiation antigens : proceedings of the fifth international workshop and conference held in Boston, USA, 3-7 November, 1993.* Oxford: Oxford University Press; 1995(Biology)