SANTA CRUZ BIOTECHNOLOGY, INC.

CD69 (FN50): sc-18880

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CD69 is expressed as disulfide-linked homodimer called the activation inducer molecule (AIM), which is composed of two differentially glycosylated forms of a single protein. CD69 is among the earliest antigens to appear after activation of T cells, B cells and NK cells. CD69 is expressed constitutively on platelets, $CD4^+$ or $CD8^+$ thymocytes, and germinal center T cells, but is absent from resting lymphocytes.

REFERENCES

1. Hamann, J., et al. 1993. Expression cloning of the early activation antigen CD69, a type II integral membrane protein with a C-type lectin domain. J. Immunol. 150: 4920-4927.
2. Lopez-Cabrera, M., et al. 1993. Molecular cloning, expression, and chromosomal localization of the human earliest lymphocyte activation antigen AIM/CD69, a new member of the C-type animal lectin superfamily of signal-transmitting receptors. J. Exp. Med. 178: 537-547.
3. Ziegler, S.F., et al. 1993. Molecular characterization of the early activation antigen CD69: a type II membrane glycoprotein related to a family of natural killer cell activation antigens. Eur. J. Immunol. 23: 1643-1648.
4. Testi, R., et al. 1994. The CD69 receptor: a multipurpose cell-surface trigger for hematopoietic cells. Immunol. Today 15: 479-483.
5. Vance, B.A., et al. 1997. Multiple dimeric forms of human CD69 result from differential addition of N-glycans to typical (Asn-X-Ser/Thr) and atypical (Asn-X-cys) glycosylation motifs. J. Biol. Chem. 272: 23117-23122.
6. Natarajan, K., et al. 2000. Crystal structure of human CD69: a C-type lectin-like activation marker of hematopoietic cells. Biochemistry 39: 14779-14786.

CHROMOSOMAL LOCATION

Genetic locus: CD69 (human) mapping to 12p13.31.

SOURCE

CD69 (FN50) is a mouse monoclonal antibody raised against stimulated human B-lymphocytes.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD69 (FN50) is available conjugated to either phycoerythrin (sc-18880 PE), fluorescein (sc-18880 FITC) or Alexa Fluor® 488 (sc-18880 AF488) or Alexa Fluor® 647 (sc-18880 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

CD69 (FN50) is recommended for detection of CD69 of human and primate origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for CD69 siRNA (h): sc-42800, CD69 shRNA Plasmid (h): sc-42800-SH and CD69 shRNA (h) Lentiviral Particles: sc-42800-V.

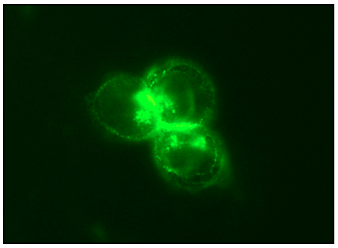
Molecular Weight of CD69 dimer: 60 kDa.

Molecular Weight of glycosylated CD69 subunits: 27/33 kDa.

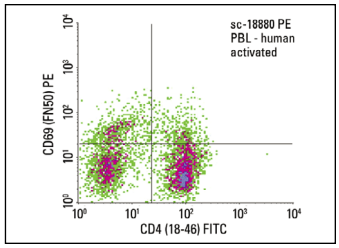
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



CD69 (FN50): sc-18880. Immunofluorescence staining of methanol-fixed, PMA-induced Jurkat cells showing membrane localization.



CD69 (FN50) PE: sc-18880 PE. FCM analysis of PMA-stimulated human peripheral blood leukocytes stained with CD69 (FN50) PE and CD4 (18-46) FITC: sc-1176 FITC. Quadrant markers were set based on the isotype controls, normal mouse IgG_1-PE: sc-2866 and normal mouse IgG_{2b}-FITC: sc-2857.

SELECT PRODUCT CITATIONS

1. Schupp, D.J., et al. 2006. Right ventricular expression of extracellular matrix proteins, matrix-metalloproteinases, and their inhibitors over a period of 3 years after heart transplantation. Virchows Arch. 448: 184-194.
2. Koch, M., et al. 2006. Tumor infiltrating T lymphocytes in colorectal cancer: tumor-selective activation and cytotoxic activity *in situ*. Ann. Surg. 244: 986-992.
3. Pache, L., et al. 2015. BIRC2/cIAP1 is a negative regulator of HIV-1 transcription and can be targeted by Smac mimetics to promote reversal of viral latency. Cell Host Microbe 18: 345-353.

RESEARCH USE

For research use only, not for use in diagnostic procedures.