

# CD69 (HP-4B3): sc-65270

## BACKGROUND

CD69 is expressed as a 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<sup>+</sup> or CD8<sup>+</sup> thymocytes, and germinal center T cells, but is absent from resting lymphocytes.

## REFERENCES

1. Hamann, J., Fiebig, H. and Strauss, M. 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., Santis, A.G., Fernandez-Ruiz, E., Blacher, R., Esch, F., Sanchez-Mateos, P. and Sanchez-Madrid, F. 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., Ramsdell, F., Hjerrild, K.A., Armitage, R.J., Grabstein, K.H., Hennen, K.B., Farrah, T., Fanslow, W.C., Shevach, E.M. and Alderson, M.R. 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., D'Ambrosio, D., De Maria, R. and Santoni, A. 1994. The CD69 receptor: a multipurpose cell-surface trigger for hematopoietic cells. *Immunol. Today* 15: 479-483.
5. Vance, B.A., Wu, W., Ribaudo, R.K., Segal, D.M. and Kearse, K.P. 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., Sawicki, M.W., Margulies, D.H. and Mariuzza, R.A. 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 (HP-4B3) is a mouse monoclonal antibody raised against IL-2 activated NK cells of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

CD69 (HP-4B3) is recommended for detection of CD69 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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.

Positive Controls: K-562 whole cell lysate: sc-2203, HuT 78 whole cell lysate: sc-2208 or Jurkat whole cell lysate: sc-2204.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.