CD99 (M-12): sc-241355



The Power to Question

BACKGROUND

CD99, also known as D4 or PILR-L (paired immunoglobin-like type 2 receptor-ligand), is a 175 amino acid single-pass type I membrane protein that belongs to the CD99 family. Existing as a homodimer that interacts with PILR- β , CD99 is involved in lymphocyte transendothelial migration (TEM) and the recruitment of lymphocytes to inflamed skin. CD99 also plays a role in T cell adhesion, and in the generation of Hodgkin and Reed-Sternberg cells. High levels of CD99 can be found in lung, spleen, thymus, liver and spinal cord, as well as a wide range of T-cells. The gene encoding CD99 maps to mouse chromosome 4.

REFERENCES

- Bixel, G., Kloep, S., Butz, S., Petri, B., Engelhardt, B. and Vestweber, D. 2004. Mouse CD99 participates in T-cell recruitment into inflamed skin. Blood 104: 3205-3213.
- Shiratori, I., Ogasawara, K., Saito, T., Lanier, L.L. and Arase, H. 2004. Activation of natural killer cells and dendritic cells upon recognition of a novel CD99-like ligand by paired immunoglobulin-like type 2 receptor. J. Exp. Med. 199: 525-533.
- Park, S.H., Shin, Y.K., Suh, Y.H., Park, W.S., Ban, Y.L., Choi, H.S., Park, H.J. and Jung, K.C. 2005. Rapid divergency of rodent CD99 orthologs: implications for the evolution of the pseudoautosomal region. Gene 353: 177-188.
- van Wanrooij, E.J., de Vos, P., Bixel, M.G., Vestweber, D., van Berkel, T.J. and Kuiper, J. 2008. Vaccination against CD99 inhibits atherogenesis in low-density lipoprotein receptor-deficient mice. Cardiovasc. Res. 78: 590-596.
- Dufour, E.M., Deroche, A., Bae, Y. and Muller, W.A. 2008. CD99 is essential for leukocyte diapedesis in vivo. Cell Commun. Adhes. 15: 351-363.
- Wang, J., Shiratori, I., Satoh, T., Lanier, L.L. and Arase, H. 2008. An essential role of sialylated O-linked sugar chains in the recognition of mouse CD99 by paired Ig-like type 2 receptor (PILR). J. Immunol. 180: 1686-1693.
- Bixel, M.G., Li, H., Petri, B., Khandoga, A.G., Khandoga, A., Zarbock, A., Wolburg-Buchholz, K., Wolburg, H., Sorokin, L., Zeuschner, D., Maerz, S., Butz, S., Krombach, F. and Vestweber, D. 2010. CD99 and CD99L2 act at the same site as, but independently of, PECAM-1 during leukocyte diapedesis. Blood 116: 1172-1184.
- 8. Hong, J., Park, S., Park, J., Jang, S.J., Ahn, H.K., Sym, S.J., Cho, E.K., Shin, D.B. and Lee, J.H. 2012. CD99 expression and newly diagnosed diffuse large B-cell lymphoma treated with rituximab-CHOP immunochemotherapy. Ann. Hematol. 91:1897-1906.
- Park, H.J., Byun, D., Lee, A.H., Kim, J.H., Ban, Y.L., Araki, M., Araki, K., Yamamura, K., Kim, I., Park, S.H. and Jung, K.C. 2012. CD99-dependent expansion of myeloid-derived suppressor cells and attenuation of graftversus-host disease. Mol. Cells 33: 259-267.

STORAGE

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

CHROMOSOMAL LOCATION

Genetic locus: Cd99 (mouse) mapping to 4.

SOURCE

CD99 (M-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of CD99 of mouse origin.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-241355 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CD99 (M-12) is recommended for detection of CD99 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with MIC2L1.

Suitable for use as control antibody for CD99 siRNA (m): sc-142203, CD99 shRNA Plasmid (m): sc-142203-SH and CD99 shRNA (m) Lentiviral Particles: sc-142203-V.

Molecular Weight of CD99: 17 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3800 fax 831.457.3801 **Europe** +00800 4573 8000 49 6221 4503 0 **www.scbt.com**