

# CD97 (1.BB.595): sc-70819

## BACKGROUND

CD97 is a member of the EGF-TM7 (seven-span transmembrane) protein family, which is characterized by an extended extracellular region with a variable number of N-terminal EGF-like domains coupled to a TM7 stalk. It is expressed by leukocytes following activation. CD97 binds to its cellular ligand CD55 (decay accelerating factor) and protects several cell types from complement-mediated damage. The CD97-CD55 interaction may play a role in cellular activation, migration and adhesion following inflammation. CD97 expression is increased in thyroid cancer, paralleling dedifferentiation and tumor staging in this disease. Many colorectal cell lines are also CD97<sup>+</sup>, with CD97 levels correlating with migration and invasion in vitro. CD97 is also expressed in various gastric, pancreatic and esophageal carcinomas. CD97 shares significant homology with EMR2, however the two proteins exhibit different expression patterns, as EMR2 is not expressed in any of the aforementioned cancer cells.

## REFERENCES

1. Lea, S. 2001. Interactions of CD55 with non-complement ligands. *Biochem. Soc. Trans.* 30: 1014-1019.
2. Aust, G., Steinert, M., Schutz, A., Boltze, C., Wahlbuhl, M., Hamann, J. and Wobus, M. 2002. CD97, but not its closely related EGF-TM7 family member EMR2, is expressed on gastric, pancreatic, and esophageal carcinomas. *Am. J. Clin. Pathol.* 118: 699-707.
3. Steinert, M. Wobus, M., Boltze, C., Schütz, A., Wahlbuhl, M., Hamann, J. and Aust, G. 2002. Expression and regulation of CD97 in colorectal carcinoma cell lines and tumor tissues. *Am. J. Pathol.* 161: 1657-1667.
4. Kwakkenbos, M.J., Chang, G.W., Lin, H.H., Pouwels, W., de Jong, E.C., van Lier, R.A., Gordon, S. and Hamann, J. 2002. The human EGF-TM7 family member EMR2 is a heterodimeric receptor expressed on myeloid cells. *J. Leukoc. Biol.* 71: 854-862.
5. Visser, L., de Vos, A.F., Hamann, J., Melief, M.J., van Meurs, M., van Lier, R.A., Laman, J.D. and Hintzen, R.Q. 2002. Expression of the EGF-TM7 receptor CD97 and its ligand CD55 (DAF) in multiple sclerosis. *J. Neuroimmunol.* 132: 156-163.

## CHROMOSOMAL LOCATION

Genetic locus: CD97 (human) mapping to 19p13.

## SOURCE

CD97 (1.BB.595) is a mouse monoclonal antibody raised against PHA-activated PBL of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> in 1.0 mL PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as or fluorescein (sc-70819 FITC) conjugate for flow cytometry, 100 tests.

## RESEARCH USE

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

## APPLICATIONS

CD97 (1.BB.595) is recommended for detection of CD97 of human origin by immunoprecipitation [1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)] and flow cytometry (1 µg per 1 x 10<sup>6</sup> cells).

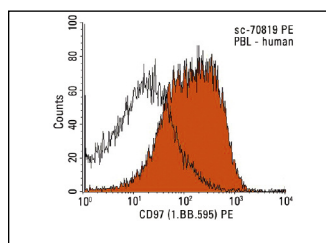
Suitable for use as control antibody for CD97 siRNA (h): sc-42864, CD97 shRNA Plasmid (h): sc-42864-SH and CD97 shRNA (h) Lentiviral Particles: sc-42864-V.

Molecular Weight of CD97: 70-85 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## DATA



CD97 (1.BB.595): sc-70819. Indirect FCM analysis of human peripheral blood leukocytes stained with CD97 (MEM-180), followed by PE-conjugated goat anti-mouse IgG<sub>1</sub>: sc-3764. Black line histogram represents the isotype control, normal mouse IgG<sub>1</sub>: sc-3877.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.