

# CD97 (E-17): sc-31096

## 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. CD97 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+, 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. 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. Leuk. Biol.* 71: 854-862.
4. Steinert, M., Wobus, M., Boltze, C., Schutz, 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.
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; Cd97 (mouse) mapping to 8 C2.

## SOURCE

CD97 (E-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of CD97 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-31096 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

CD97 (E-17) is recommended for detection of CD97 of human 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).

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) 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.

## STORAGE

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

## 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) or our catalog for detailed protocols and support products.



Try **CD97 (G-8): sc-166852**, our highly recommended monoclonal alternative to CD97 (E-17).