

CD97 (M-245): sc-98577

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+, 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.
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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 (mouse) mapping to 8 C2.

SOURCE

CD97 (M-245) is a rabbit polyclonal antibody raised against amino acids 265-509 mapping within an internal region of CD97 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG 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

CD97 (M-245) is recommended for detection of CD97 of mouse and rat 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)], 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 (m): sc-63305, CD97 shRNA Plasmid (m): sc-63305-SH and CD97 shRNA (m) Lentiviral Particles: sc-63305-V.

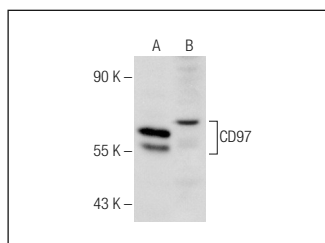
Molecular Weight of CD97: 70-85 kDa.

Positive Controls: P388D1 whole cell lysate or mouse PBL whole cell lysate.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CD97 (M-245): sc-98577. Western blot analysis of CD97 expression in mouse PBL (A) and P388D1 (B) whole cell lysates.

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.