

CD97 (G-8): sc-166852

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.
2. Aust, G., et al. 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., et al. 2002. Expression and regulation of CD97 in colorectal carcinoma cell lines and tumor tissues. *Am. J. Pathol.* 161: 1657-1667.
4. Kwakkenbos, M.J., et al. 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., et al. 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: ADGRE5 (human) mapping to 19p13.12; Adgre5 (mouse) mapping to 8 C2.

SOURCE

CD97 (G-8) is a mouse monoclonal antibody raised against amino acids 287-531 mapping within an internal region of CD97 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD97 (G-8) is available conjugated to agarose (sc-166852 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166852 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166852 PE), fluorescein (sc-166852 FITC), Alexa Fluor® 488 (sc-166852 AF488), Alexa Fluor® 546 (sc-166852 AF546), Alexa Fluor® 594 (sc-166852 AF594) or Alexa Fluor® 647 (sc-166852 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166852 AF680) or Alexa Fluor® 790 (sc-166852 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CD97 (G-8) is recommended for detection of CD97 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 (h): sc-42864, CD97 siRNA (m): sc-63305, CD97 shRNA Plasmid (h): sc-42864-SH, CD97 shRNA Plasmid (m): sc-63305-SH, CD97 shRNA (h) Lentiviral Particles: sc-42864-V and CD97 shRNA (m) Lentiviral Particles: sc-63305-V.

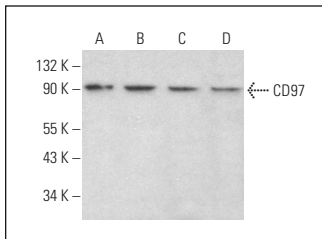
Molecular Weight of CD97: 70-85 kDa.

Positive Controls: U-937 cell lysate: sc-2239, HL-60 whole cell lysate: sc-2209 or M1 whole cell lysate: sc-364782.

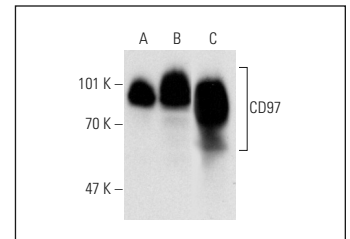
RECOMMENDED SUPPORT REAGENTS

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.

DATA



CD97 (G-8): sc-166852. Western blot analysis of CD97 expression in M1 (A), BC₃H1 (B), WEHI-231 (C) and F9 (D) whole cell lysates.



CD97 (G-8): sc-166852. Western blot analysis of CD97 expression in U-937 (A), HL-60 (B) and human PBL (C) whole cell lysates.

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 for detailed protocols and support products.

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