

CD98 (H202-141): sc-20018

BACKGROUND

CD98 (4F2, CD98, MDU1, 4F2HC, 4T2HC, NACAE, SLC3A2) is a disulfide-linked heterodimer composed of a glycosylated heavy chain and a non-glycosylated light chain. CD98 is a scaffolding protein that interacts with basolaterally expressed amino acid transporters and β 1 Integrins and can alter amino acid transport and cell adhesion, migration and branching morphogenesis. The heavy chain is a type II integral membrane protein. CD98 is expressed on T cells and is upregulated upon T cell activation. CD98 is also present on monocytes and at lower levels on granulocytes, platelets and lymphocytes. Evidence suggests that CD98 may play a role in the regulation of T cell activation and proliferation. Alternate transcriptional splice variants, encoding different isoforms exist for the human CD98 gene.

REFERENCES

1. Quackenbush, E., et al. 1987. Molecular cloning of complementary DNAs encoding the heavy chain of the human 4F2 cell-surface antigen: a type II membrane glycoprotein involved in normal and neoplastic cell growth. *Proc. Natl. Acad. Sci. USA* 84: 6526-6530.
2. Lumadue, J.A., et al. 1987. Cloning, sequence analysis, and expression of the large subunit of the human lymphocyte activation antigen 4F2. *Proc. Natl. Acad. Sci. USA* 84: 9204-9248.
3. Gottesdiener, K.M., et al. 1988. Isolation and structural characterization of the human 4F2 heavy-chain gene, an inducible gene involved in T lymphocyte activation. *Mol. Cell. Biol.* 8: 3809-3819.
4. Warren, A.P., et al. 1996. CD98: a type II transmembrane protein expressed from the beginning of primitive and definitive hematopoiesis may play a critical role in the development of hematopoietic cells. *Blood* 87: 3676-3687.
5. Diaz, L.A., Jr., et al. 1997. Monocyte-dependent regulation of T lymphocyte activation through CD98. *Int. Immunol.* 9: 1221-1231.

CHROMOSOMAL LOCATION

Genetic locus: Slc3a2 (mouse) mapping to 19 A.

SOURCE

CD98 (H202-141) is a rat monoclonal antibody raised against mouse thymic epithelial cells.

PRODUCT

Each vial contains 200 μ g IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD98 (H202-141) is available conjugated to agarose (sc-20018 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-20018 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-20018 PE), fluorescein (sc-20018 FITC), Alexa Fluor® 488 (sc-20018 AF488), Alexa Fluor® 546 (sc-20018 AF546), Alexa Fluor® 594 (sc-20018 AF594) or Alexa Fluor® 647 (sc-20018 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-20018 AF680) or Alexa Fluor® 790 (sc-20018 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

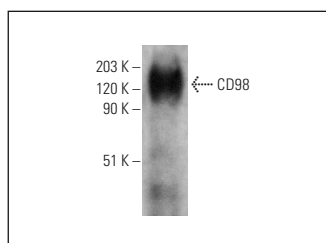
CD98 (H202-141) is recommended for detection of CD98 of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CD98 siRNA (m): sc-35034, CD98 shRNA Plasmid (m): sc-35034-SH and CD98 shRNA (m) Lentiviral Particles: sc-35034-V.

Molecular Weight of CD98: 125 kDa.

Positive Controls: CTLL-2 cell lysate: sc-2242.

DATA



Western Blot analysis of CD98 expression in CTLL-2 whole cell lysate immunoprecipitated with CD98 (H202-141): sc-20018 and detected with CD98 (M-20): sc-7094.

SELECT PRODUCT CITATIONS

1. Inamdar, V.V., et al. 2019. The protein tyrosine phosphatase PTPN7 is a negative regulator of ERK activation and thromboxane generation in platelets. *J. Biol. Chem.* 294: 12547-12554.
2. Poncet, N., et al. 2020. Wnt regulates amino acid transporter Slc7a5 and so constrains the integrated stress response in mouse embryos. *EMBO Rep.* 21: e48469.

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.