

# 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  $\beta$ 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  $\mu$ g IgG<sub>2a</sub> 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  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-20018 HRP), 200  $\mu$ 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  $\mu$ 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  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

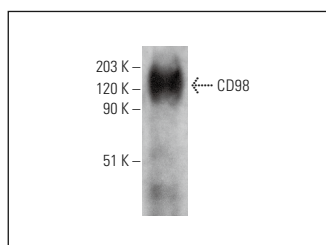
CD98 (H202-141) is recommended for detection of CD98 of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) 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](http://www.scbt.com) for detailed protocols and support products.