

CD98 (M-20): sc-7094

BACKGROUND

CD98 (4F2, CD98, MDU1, 4F2HC, 4T2HC, NACAE) 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.

CHROMOSOMAL LOCATION

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

SOURCE

CD98 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of CD98 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-7094 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CD98 (M-20) is recommended for detection of CD98 of mouse and rat 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), immunohistochemistry (including paraffin-embedded sections) (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.

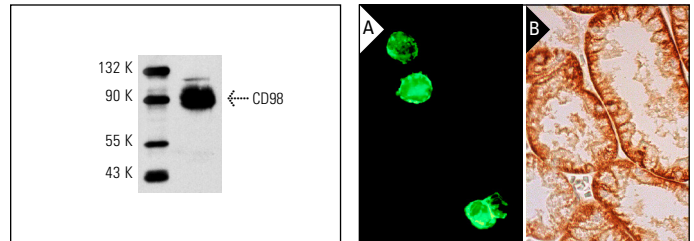
Molecular Weight of CD98: 125 kDa.

Positive Controls: CTLL-2 cell lysate: sc-2242 or rat liver extract: sc-2395.

STORAGE

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

DATA



CD98 (M-20): sc-7094. Western blot analysis of CD98 expression in CTLL-2 whole cell lysate.

CD98 (M-20): sc-7094. Immunofluorescence staining of methanol-fixed CTLL-2 cells showing membrane staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing basal membrane staining of cells in tubules (B).

SELECT PRODUCT CITATIONS

1. Sidibe, A., et al. 2007. Integrated membrane protein analysis of mature and embryonic stem cell-derived smooth muscle cells using a novel combination of CyDye/Biotin labeling. *Mol. Cell. Proteomics* 6: 1788-1797.
2. Rybak, J.N., et al. 2007. The extra-domain A of fibronectin is a vascular marker of solid tumors and metastases. *Cancer Res.* 67: 10948-10957.
3. Blecharz, K.G., et al. 2008. Glucocorticoids increase VE-cadherin expression and cause cytoskeletal rearrangements in murine brain endothelial cEND cells. *J. Cereb. Blood Flow Metab.* 28: 1139-1149.
4. Nguyen, H.T., et al. 2009. MicroRNA-7 modulates CD98 expression during intestinal epithelial cell differentiation. *J. Biol. Chem.* 285: 1479-1489.
5. Ruderisch, N., et al. 2011. Differential axial localization along the mouse brain vascular tree of luminal sodium-dependent glutamine transporters Snat1 and Snat3. *J. Cereb. Blood Flow Metab.* 31: 1637-1647.
6. Seib, T.M., et al. 2011. Regulation of the system x(C)- cystine/glutamate exchanger by intracellular glutathione levels in rat astrocyte primary cultures. *Glia* 59: 1387-1401.
7. Tsumura, H., et al. 2012. The role of CD98hc in mouse macrophage functions. *Cell. Immunol.* 276: 128-134.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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Try **CD98 (H202-141): sc-20018** or **CD98 (F-2): sc-390154**, our highly recommended monoclonal alternatives to CD98 (M-20).