

CD98 (30): sc-136139

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.
6. Rintoul, R.C., et al. 2002. Cross-linking CD98 promotes integrin-like signaling and anchorage-independent growth. *Mol. Biol. Cell* 13: 2841-2852.
7. Liu, X., et al. 2003. CD98 and intracellular adhesion molecule I regulate the activity of amino acid transporter LAT2 in polarized intestinal epithelia. *J. Biol. Chem.* 278: 23672-23677.

CHROMOSOMAL LOCATION

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

SOURCE

CD98 (30) is a mouse monoclonal antibody raised against amino acids 9-204 of CD98 of rat origin.

PRODUCT

Each vial contains 50 μ g IgG₁ in 0.5 ml of PBS with < 0.1% sodium azide, 0.1% gelatin, 20% glycerol and 0.04% stabilizer protein.

STORAGE

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

APPLICATIONS

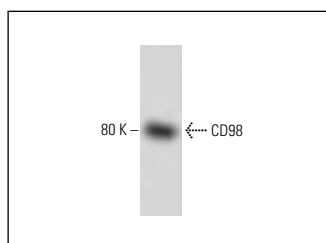
CD98 (30) is recommended for detection of CD98 heavy chain (HC) and CD98 precursor of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of CD98 HC: 80 kDa.

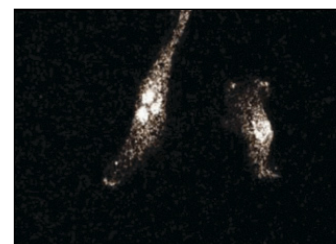
Molecular Weight of CD98 HC/LC complex: 125 kDa.

Positive Controls: rat liver extract: sc-2395.

DATA



CD98 (30): sc-136139. Western blot analysis of CD98 expression in rat liver tissue extract.



CD98 (30): sc-136139. Immunofluorescence staining of chick fibroblast cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Kintz, N., et al. 2017. Treadmill exercise modifies dopamine receptor expression in the prefrontal cortex of the 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine-lesioned mouse model of Parkinson's disease. *Neuroreport* 28: 987-995.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.