SANTA CRUZ BIOTECHNOLOGY, INC.

CD98 (N-20): sc-31251

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 β1 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.

CHROMOSOMAL LOCATION

Genetic locus: SLC3A2 (human) mapping to 11q12.3; Slc3a2 (mouse) mapping to 19 A.

SOURCE

CD98 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal cytoplasmic domain of CD98 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-31251 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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 or our catalog for detailed protocols and support products.

APPLICATIONS

CD98 (N-20) is recommended for detection of CD98 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

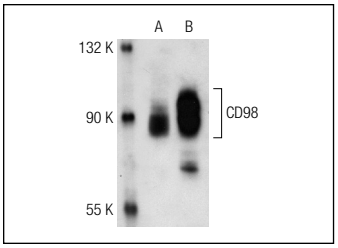
CD98 (N-20) is also recommended for detection of CD98 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for CD98 siRNA (h): sc-35033, CD98 siRNA (m): sc-35034, CD98 shRNA Plasmid (h): sc-35033-SH, CD98 shRNA Plasmid (m): sc-35034-SH, CD98 shRNA (h) Lentiviral Particles: sc-35033-V and CD98 shRNA (m) Lentiviral Particles: sc-35034-V.

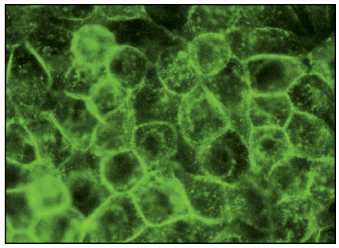
Molecular Weight of CD98: 125 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, CTLL-2 cell lysate: sc-2242 or U-937 cell lysate: sc-2239.

DATA



CD98 (N-20): sc-31251. Western blot analysis of CD98 expression in HeLa (**A**) and CTLL-2 (**B**) whole cell lysates.



CD98 (N-20): sc-31251. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Trinh, H.V., et al. 2013. iTRAQ-based and label-free proteomics approaches for studies of human adenovirus infections. Int. J. Proteomics 2013: 581862.

PROTOCOLS

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