

# CD98 (F-2): sc-390154

## 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  $\beta 1$  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.

## CHROMOSOMAL LOCATION

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

## SOURCE

CD98 (F-2) is a mouse monoclonal antibody raised against a peptide mapping within an extracellular domain of CD98 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-390154 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% 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 (F-2) is recommended for detection of CD98 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), 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).

CD98 (F-2) is also recommended for detection of CD98 in additional species, including equine.

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.

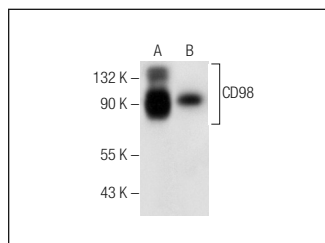
Molecular Weight of CD98: 125 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HeLa whole cell lysate: sc-2200 or U-937 cell lysate: sc-2239.

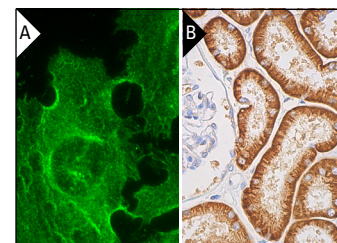
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohisto-mount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



CD98 (F-2): sc-390154. Western blot analysis of CD98 expression in HeLa (A) and U-937 (B) whole cell lysates.



CD98 (F-2): sc-390154. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing membrane and cytoplasmic staining of cells in tubules (B).

## SELECT PRODUCT CITATIONS

1. Swayampakula, M., et al. 2017. The interactome of metabolic enzyme carbonic anhydrase IX reveals novel roles in tumor cell migration and invadopodia/MMP14-mediated invasion. *Oncogene* 36: 6244-6261.
2. Liu, C., et al. 2018. SLC3A2 is a novel endoplasmic reticulum stress-related signaling protein that regulates the unfolded protein response and apoptosis. *PLoS ONE* 13: e0208993.
3. Kim, D.H., et al. 2020. TGF- $\beta$ 1-mediated repression of SLC7A11 drives vulnerability to GPX4 inhibition in hepatocellular carcinoma cells. *Cell Death Dis.* 11: 406.
4. Palani, S., et al. 2022. Exploiting glutamine consumption in atherosclerotic lesions by positron emission tomography tracer (2S,4R)-4-18F-fluoroglutamine. *Front. Immunol.* 13: 821423.
5. Yang, N., et al. 2022. Ferrostatin-1 and 3-methyladenine ameliorate ferroptosis in OVA-induced asthma model and in IL-13-challenged BEAS-2B cells. *Oxid. Med. Cell. Longev.* 2022: 9657933.

## 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.