

CD98 (E-5): sc-376815

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.

CHROMOSOMAL LOCATION

Genetic locus: SLC3A2 (human) mapping to 11q12.3.

SOURCE

CD98 (E-5) is a mouse monoclonal antibody raised against amino acids 230-529 of CD98 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD98 (E-5) is available conjugated to agarose (sc-376815 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376815 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376815 PE), fluorescein (sc-376815 FITC), Alexa Fluor[®] 488 (sc-376815 AF488), Alexa Fluor[®] 546 (sc-376815 AF546), Alexa Fluor[®] 594 (sc-376815 AF594) or Alexa Fluor[®] 647 (sc-376815 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-376815 AF680) or Alexa Fluor[®] 790 (sc-376815 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

CD98 (E-5) is recommended for detection of CD98 of human origin by Western Blotting (starting dilution 1:100, 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 (h): sc-35033, CD98 shRNA Plasmid (h): sc-35033-SH and CD98 shRNA (h) Lentiviral Particles: sc-35033-V.

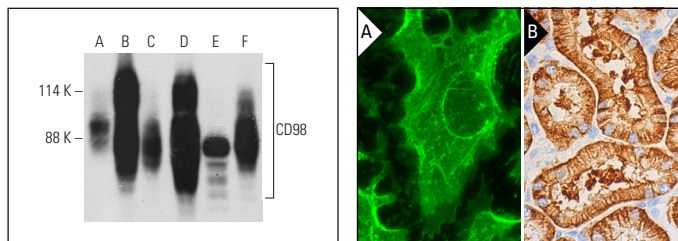
Molecular Weight of CD98: 125 kDa.

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

STORAGE

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

DATA



CD98 (E-5) HRP: sc-376815 HRP. Direct western blot analysis of CD98 expression in U-937 (A), HeLa (B), Hep G2 (C), NCI-H292 (D), SK-MEL-24 (E) and A549 (F) whole cell lysates.

CD98 (E-5): sc-376815. 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. Blocked with 0.25X UltraCruz[®] Blocking Reagent: sc-516214. Detection reagents used: m-IgGκ BP-B: sc-516142 and ImmunoCruz[®] ABC Kit: sc-516216 (B).

SELECT PRODUCT CITATIONS

- Bhat, N.M., et al. 2015. Identification of cell surface straight chain poly-N-acetyl-lactosamine bearing protein ligands for VH4-34-encoded natural IgM antibodies. *J. Immunol.* 195: 5178-5188.
- Palladino, S.P., et al. 2017. The human blood-nerve barrier transcriptome. *Sci. Rep.* 7: 17477.
- Fuchs, R., et al. 2018. Prazosin induced lysosomal tubulation interferes with cytokinesis and the endocytic sorting of the tumour antigen CD98hc. *Biochim. Biophys. Acta Mol. Cell Res.* 1865: 1211-1229.
- Lagunas-Cruz, M.D.C., et al. 2019. IL-2 induces transient arrest in the G₁ phase to protect cervical cancer cells from entering apoptosis. *J. Oncol.* 2019: 7475295.
- Zaugg, J., et al. 2020. Small molecule inhibitors provide insights into the relevance of LAT1 and LAT2 in materno-foetal amino acid transport. *J. Cell. Mol. Med.* 24: 12681-12693.
- Abdollahi, P., et al. 2021. Phosphatase of regenerating liver-3 regulates cancer cell metabolism in multiple myeloma. *FASEB J.* 35: e21344.
- Heider, M., et al. 2021. The IMiD target CRBN determines HSP90 activity toward transmembrane proteins essential in multiple myeloma. *Mol. Cell* 81: 1170-1186.e10.
- Wu, F., et al. 2022. SLC3A2 inhibits ferroptosis in laryngeal carcinoma via mTOR pathway. *Hereditas* 159: 6.
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RESEARCH USE

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