SANTA CRUZ BIOTECHNOLOGY, INC.

CD98 (E-5): sc-376815

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.

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 µg IgG_1 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 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376815 HRP), 200 µg/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 µg/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 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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 µg per 100-500 µg 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.

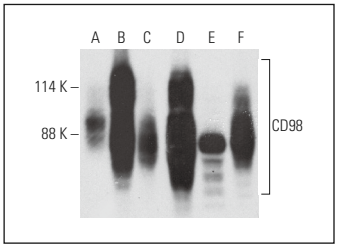
Molecular Weight of CD98: 125 kDa.

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

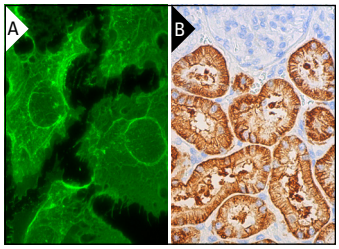
STORAGE

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

1. 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.
2. Palladino, S.P., et al. 2017. The human blood-nerve barrier transcriptome. Sci. Rep. 7: 17477.
3. 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.
4. Lagunas-Cruz, M.D.C., et al. 2019. IL-2 induces transient arrest in the G_1 phase to protect cervical cancer cells from entering apoptosis. J. Oncol. 2019: 7475295.
5. 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.
6. Abdollahi, P., et al. 2021. Phosphatase of regenerating liver-3 regulates cancer cell metabolism in multiple myeloma. FASEB J. 35: e21344.
7. Wu, F., et al. 2022. SLC3A2 inhibits ferroptosis in laryngeal carcinoma via mTOR pathway. Hereditas 159: 6.
8. Alborzinia, H., et al. 2023. LRP8-mediated selenocysteine uptake is a targetable vulnerability in MYCN-amplified neuroblastoma. EMBO Mol. Med. 15: e18014.
9. Yanagida, S., et al. 2024. LAT1 supports mitotic progression through Golgi unlinking in an amino acid transport activity-independent manner. J. Biol. Chem. 300: 107761.

RESEARCH USE

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