SANTA CRUZ BIOTECHNOLOGY, INC.

CD133 (E-11): sc-365537

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CD133, also known as PROML1 or Prominin, is a stem cell antigen that may be useful for the selection and expansion of hematopoietic cells, and may be used as a positive marker for the characterization of trophoblast cell lines. The human CD133 gene maps to chromosome 4p15.32 and encodes an 865 amino acid protein. The CD133 gene codes for a pentaspan transmembrane glycoprotein that is expressed on primitive hematopoietic stem, progenitor, retinoblastoma, hemangioblasts and neural stem cells and developing epithelium. The 5-TM structure includes an extracellular N-terminus, two short intracellular loops, two large extracellular loops and an intracellular C-terminus. CD133 is a candidate gene for retinal proteins that are targeted to plasma membrane protrusions. These retinal proteins, including CD133, may influence the shedding of photoreceptive membranes from the terminal end of the outer segments of vertebrate photoreceptors, where they are phagocytosed by the retinal pigment epithelium, and represent candidates for inherited retinal degenerations.

CHROMOSOMAL LOCATION

Genetic locus: PROM1 (human) mapping to 4p15.32; Prom1 (mouse) mapping to 5 B3.

SOURCE

CD133 (E-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 841-865 at the C-terminus of CD133 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.

CD133 (E-11) is available conjugated to agarose (sc-365537 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365537 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365537 PE), fluorescein (sc-365537 FITC), Alexa Fluor® 488 (sc-365537 AF488), Alexa Fluor® 546 (sc-365537 AF546), Alexa Fluor® 594 (sc-365537 AF594) or Alexa Fluor® 647 (sc-365537 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365537 AF680) or Alexa Fluor® 790 (sc-365537 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

CD133 (E-11) is recommended for detection of CD133 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).

Suitable for use as control antibody for CD133 siRNA (h): sc-42820, CD133 siRNA (m): sc-42821, CD133 shRNA Plasmid (h): sc-42820-SH, CD133 shRNA Plasmid (m): sc-42821-SH, CD133 shRNA (h) Lentiviral Particles: sc-42820-V and CD133 shRNA (m) Lentiviral Particles: sc-42821-V.

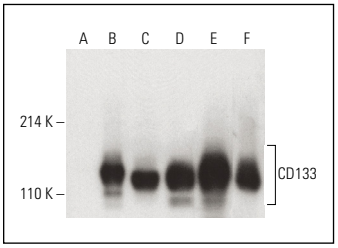
Molecular Weight of CD133: 120 kDa.

Positive Controls: CD133 (h3): 293T Lysate: sc-175470, Y79 cell lysate: sc-2240 or human salivary gland extract: sc-363762.

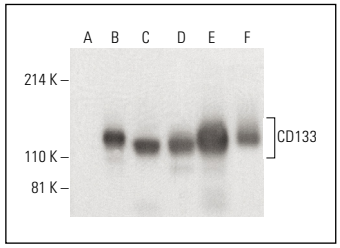
STORAGE

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

DATA



CD133 (E-11): sc-365537. Western blot analysis of CD133 expression in non-transfected 293T: sc-117752 (**A**), human CD133 transfected 293T: sc-175470 (**B**), Y79 (**C**), NTERA-2 cl.D1 (**D**) and Caco-2 (**E**) whole cell lysates and human salivary gland tissue extract (**F**). Detection reagent used: m-IgG_1 BP-HRP: sc-525408.



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SELECT PRODUCT CITATIONS

1. Zeng, W., et al. 2021. Endothelial progenitor cell-derived microvesicles promote angiogenesis in rat brain microvascular endothelial cells *in vitro*. Front. Cell. Neurosci. 15: 638351.
2. Huang, T.Y., et al. 2023. Furanocoumarin notopterol: inhibition of hepatocellular carcinogenesis through suppression of cancer stemness signaling and induction of oxidative stress-associated cell death. Nutrients 15: 2447.
3. Bian, L., et al. 2023. Ectoderm mesenchymal stem cells promote osteogenic differentiation of MC3T3-E1 cells by targeting sonic hedgehog signaling pathway. Mol. Biol. Rep. 50: 1293-1302.
4. Wang, C., et al. 2023. Thioredoxin facilitates hepatocellular carcinoma stemness and metastasis by increasing BACH1 stability to activate the AKT/mTOR pathway. FASEB J. 37: e22943.
5. Shi, W., et al. 2023. A multifunctional polydopamine/genipin/alendronate nanoparticle licences fibrin hydrogels osteoinductive and immunomodulatory potencies for repairing bone defects. Int. J. Biol. Macromol. 249: 126072.
6. Yuan, Y., et al. 2024. Promotion of stem cell-like phenotype of lung adenocarcinoma by FAM83A via stabilization of ErbB2. Cell Death Dis. 15: 460.
7. Guo, J., et al. 2024. Mesothelin-based CAR-T cells exhibit potent antitumor activity against ovarian cancer. J. Transl. Med. 22: 367.
8. Qin, W., et al. 2024. Tibial cortex transverse transport promotes ischemic diabetic foot ulcer healing via enhanced angiogenesis and inflammation modulation in a novel rat model. Eur. J. Med. Res. 29: 155.
9. Casciati, A., et al. 2024. Involvement of mitochondria in the selective response to microsecond pulsed electric fields on healthy and cancer stem cells in the brain. Int. J. Mol. Sci. 25: 2233.

RESEARCH USE

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