SANTA CRUZ BIOTECHNOLOGY, INC.

CD151 (H-8): sc-271216

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CD151 is involved in a wide variety of cell biological processes, including cell adhesion and the transport of integrins via vesicles. The human CD151 gene maps to chromosome 11p15.5 and encodes a 253-amino acid protein, which belongs to the tetraspan (4TM) superfamily. CD151 can associate with several Integrin chains including β1, β3, β4, α2, α3, α5 and α6 Integrins. CD151 may provide a framework for the spatial organization of both type I and type II hemidesmosomes, which are specialized junctional complexes that function as cell-attachment sites for binding to basement membranes. CD151 RNA transcript (1.6 kb) can be detected in MO7e cells, bone marrow stromal cells, C11 endothelial cells, HUVEC and several myeloid leukemia cell lines, however, no transcript is detected in brain and the lymphoblastoid cell lines MOLT-4 and BALM-1. Leu149 - Glu213 of CD151 is the interface through which Integrins α3/β1 can bind. CD151 can enhance cell motility, invasion and metastasis of cancer cells in a focal adhesion kinase dependent manner.

CHROMOSOMAL LOCATION

Genetic locus: CD151 (human) mapping to 11p15.5.

SOURCE

CD151 (H-8) is a mouse monoclonal antibody raised against amino acids 101-180 mapping within an extracellular domain of CD151 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.

CD151 (H-8) is available conjugated to agarose (sc-271216 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-271216 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271216 PE), fluorescein (sc-271216 FITC), Alexa Fluor® 488 (sc-271216 AF488), Alexa Fluor® 546 (sc-271216 AF546), Alexa Fluor® 594 (sc-271216 AF594) or Alexa Fluor® 647 (sc-271216 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271216 AF680) or Alexa Fluor® 790 (sc-271216 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CD151 (H-8) is recommended for detection of CD151 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 CD151 siRNA (h): sc-42829, CD151 shRNA Plasmid (h): sc-42829-SH and CD151 shRNA (h) Lentiviral Particles: sc-42829-V.

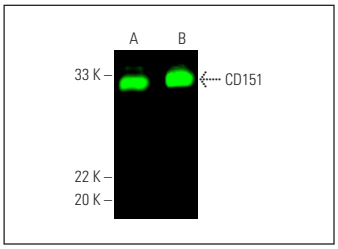
Molecular Weight of CD151: 28-32 kDa.

Positive Controls: human platelet extract: sc-363773, human prostate extract: sc-363774 or Saos-2 cell lysate: sc-2235.

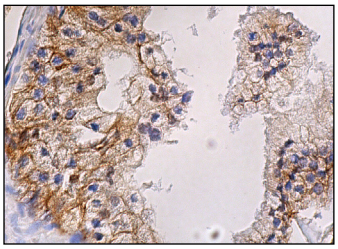
STORAGE

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

DATA



CD151 (H-8): sc-271216. Near-infrared western blot analysis of CD151 expression in human prostate tissue extract (**A**) and human platelet extract (**B**). Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.



CD151 (H-8): sc-271216. Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing membrane and cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Liu, T., et al. 2016. PIK3C2A mRNA functions as a miR-124 sponge to facilitate CD151 expression and enhance malignancy of hepatocellular carcinoma cells. Oncotarget 7: 43376-43389.
2. Mieszkowska, M., et al. 2019. Tetraspanin CD151 impairs heterodimerization of ErbB2/ErbB3 in breast cancer cells. Transl. Res. 207: 44-55.
3. Giampieri, R., et al. 2019. Clinical impact of different exosomes' protein expression in pancreatic ductal carcinoma patients treated with standard first line palliative chemotherapy. PLoS ONE 14: e0215990.
4. Li, Y., et al. 2020. Scutellarein inhibits the development of colon cancer via Cdc4-mediated RAGE ubiquitination. Int. J. Mol. Med. 45: 1059-1072.
5. Xing, Z., et al. 2020. The RNA helicase DDX5 supports mitochondrial function in small cell lung cancer. J. Biol. Chem. 295: 8988-8998.
6. Zhu, J., et al. 2021. CD151 drives cancer progression depending on integrin α3β1 through EGFR signaling in non-small cell lung cancer. J. Exp. Clin. Cancer Res. 40: 192.
7. Grzanka, M., et al. 2022. Extracellular vesicles as signal carriers in malignant thyroid tumors? Int. J. Mol. Sci. 23: 3262.
8. Mohammadi Ghahhari, N., et al. 2022. Cooperative interaction between ERα and the EMT-inducer ZEB1 reprograms breast cancer cells for bone metastasis. Nat. Commun. 13: 2104.
9. Zhou, J., et al. 2022. Integrin α3/α6 and αV are implicated in ADAM15-activated FAK and EGFR signalling pathway individually and promote non-small-cell lung cancer progression. Cell Death Dis. 13: 486.

RESEARCH USE

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