SANTA CRUZ BIOTECHNOLOGY, INC.

TMEM205 (B-5): sc-514568

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cisplatin is a potent platinum-based anti-neoplastic agent that is believed to form inter- and intrastrand DNA adducts that activate signaling pathways culminating in apoptosis. Cisplatin has been suggested to induce apoptosis through caspase-3 activation and XIAP expression. TMEM205 is a 189 amino acid transmembrane protein that is expressed in liver, pancreas, and adrenal glands. Elevated levels of Rab 8 and TMEM205 in cells may be associated with cisplatin resistance. TMEM205 is suggested to be a biomarker or target in cancer chemotherapy. TMEM205 is encoded by a gene located on human chromosome 19, which consist of around 63 million bases with over 1,400 genes, and makes up over 2% of human genomic DNA.

REFERENCES

1. Huber, L.A., et al. 1995. A deficiency of the small GTPase rab8 inhibits membrane traffic in developing neurons. Mol. Cell. Biol. 15: 918-924.
2. Siddik, Z.H. 2003. Cisplatin: mode of cytotoxic action and molecular basis of resistance. Oncogene 22: 7265-7279.
3. Konkimalla, V.B., et al. 2008. Role of transporter genes in cisplatin resistance. In Vivo 22: 279-283.
4. Shen, D.W., et al. 2010. Elevated expression of TMEM205, a hypothetical membrane protein, is associated with cisplatin resistance. J. Cell. Physiol. 225: 822-828.
5. Shen, D.W. and Gottesman, M.M. 2012. RAB8 enhances TMEM205-mediated cisplatin resistance. Pharm. Res. 29: 643-650.
6. Wang, Y., et al. 2014. The association of transporter genes polymorphisms and lung cancer chemotherapy response. PLoS ONE 9: e91967.
7. Dorr, C., et al. 2015. Differentially expressed gene transcripts using RNA sequencing from the blood of immunosuppressed kidney allograft recipients. PLoS ONE 10: e0125045.

CHROMOSOMAL LOCATION

Genetic locus: TMEM205 (human) mapping to 19p13.2; Tmem205 (mouse) mapping to 9 A3.

SOURCE

TMEM205 (B-5) is a mouse monoclonal antibody raised against amino acids 15-179 mapping within an internal region of TMEM205 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TMEM205 (B-5) is available conjugated to agarose (sc-514568 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514568 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514568 PE), fluorescein (sc-514568 FITC), Alexa Fluor® 488 (sc-514568 AF488), Alexa Fluor® 546 (sc-514568 AF546), Alexa Fluor® 594 (sc-514568 AF594) or Alexa Fluor® 647 (sc-514568 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514568 AF680) or Alexa Fluor® 790 (sc-514568 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

TMEM205 (B-5) is recommended for detection of TMEM205 of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TMEM205 siRNA (h): sc-97181, TMEM205 siRNA (m): sc-154439, TMEM205 shRNA Plasmid (h): sc-97181-SH, TMEM205 shRNA Plasmid (m): sc-154439-SH, TMEM205 shRNA (h) Lentiviral Particles: sc-97181-V and TMEM205 shRNA (m) Lentiviral Particles: sc-154439-V.

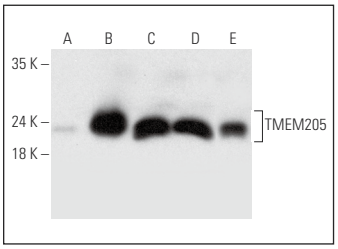
Molecular Weight of TMEM205: 21 kDa.

Positive Controls: TMEM205 (m): 293T Lysate: sc-124148, RT-4 whole cell lysate: sc-364257 or human pancreas extract: sc-363770.

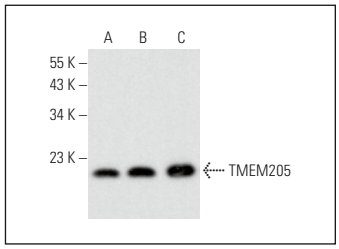
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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 A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



TMEM205 (B-5): sc-514568. Western blot analysis of TMEM205 expression in non-transfected 293T: sc-117752 (**A**), mouse TMEM205 transfected 293T: sc-124148 (**B**), RT-4 (**C**) and U-251-MG (**D**) whole cell lysates and human pancreas tissue extract (**E**).



TMEM205 (B-5): sc-514568. Western blot analysis of TMEM205 expression in Hep G2 (**A**) and MCF7 (**B**) whole cell lysates and rat liver tissue extract (**C**).

STORAGE

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

RESEARCH USE

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