SANTA CRUZ BIOTECHNOLOGY, INC.

CD81 (5A6): sc-23962

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CD81, also called TAPA-1, is a type III transmembrane protein that is broadly expressed on cells of hematopoietic, neuroectodermal and mesenchymal origin. CD81 is believed to be involved in both cell growth and signal transduction. CD81 can be present as a multimolecular complex in association with CD37 and/or CD53, or on the surface of B cells in association with CD19, CD21 and/or MHC class II antigens.

CHROMOSOMAL LOCATION

Genetic locus: CD81 (human) mapping to 11p15.5; Cd81 (mouse) mapping to 7 F5.

SOURCE

CD81 (5A6) is a mouse monoclonal antibody raised against OCI-LY8 cells.

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.

CD81 (5A6) is available conjugated to agarose (sc-23962 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-23962 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-23962 PE), fluorescein (sc-23962 FITC), Alexa Fluor® 488 (sc-23962 AF488), Alexa Fluor® 546 (sc-23962 AF546), Alexa Fluor® 594 (sc-23962 AF594) or Alexa Fluor® 647 (sc-23962 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-23962 AF680) or Alexa Fluor® 790 (sc-23962 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CD81 (5A6) is recommended for detection of CD81 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 flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for CD81 siRNA (h): sc-35030, CD81 siRNA (m): sc-37251, CD81 shRNA Plasmid (h): sc-35030-SH, CD81 shRNA Plasmid (m): sc-37251-SH, CD81 shRNA (h) Lentiviral Particles: sc-35030-V and CD81 shRNA (m) Lentiviral Particles: sc-37251-V.

Molecular Weight of CD81: 22-26 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Jurkat whole cell lysate: sc-2204 or human testis extract: sc-363781.

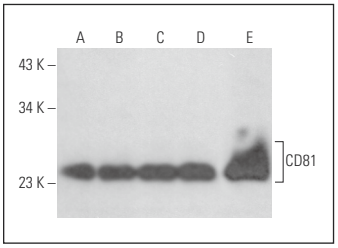
RECOMMENDED SUPPORT REAGENTS

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.

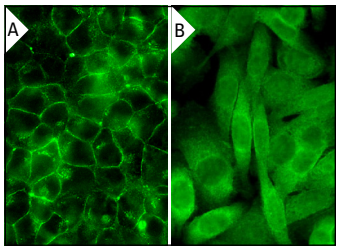
STORAGE

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

DATA



CD81 (5A6): sc-23962. Western blot analysis of CD81 expression in U-698-M (**A**), K-562 (**B**), Jurkat (**C**) and MOLT-4 (**D**) whole cell lysates and human testis tissue extract (**E**).



CD81 (5A6): sc-23962. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (**A**). CD81 (5A6) Alexa Fluor® 488: sc-23962 AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing membrane and cytoplasmic localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (**B**).

SELECT PRODUCT CITATIONS

1. Higginbottom, A., et al. 2000. Identification of amino acid residues in CD81 critical for interaction with hepatitis C virus envelope glycoprotein E2. J. Virol. 74: 3642-3649.
2. Lin, X., et al. 2012. MicroRNAs and unusual small RNAs discovered in Kaposi's sarcoma-associated herpesvirus virions. J. Virol. 86: 12717-12730.
3. Wilkins, C., et al. 2013. IFITM1 is a tight junction protein that inhibits hepatitis C virus entry. Hepatology 57: 461-469.
4. Bukong, T.N., et al. 2014. Exosomes from hepatitis C infected patients transmit HCV infection and contain replication competent viral RNA in complex with Ago2-miR122-HSP90. PLoS Pathog. 10: e1004424.
5. Hagiwara, K., et al. 2015. Commitment of Annexin A2 in recruitment of microRNAs into extracellular vesicles. FEBS Lett. 589: 4071-4078.
6. Yang, Z., et al. 2016. Neglected but important role of apolipoprotein E exchange in hepatitis C virus infection. J. Virol. 90: 9632-9643.
7. McKnight, K.L., et al. 2017. Protein composition of the hepatitis A virus quasi-envelope. Proc. Natl. Acad. Sci. USA 114: 6587-6592.
8. Chen, W., et al. 2018. Phosphorylation of connexin 43 induced by traumatic brain injury promotes exosome release. J. Neurophysiol. 119: 305-311.
9. Mancio-Silva, L., et al. 2019. Improving drug discovery by nucleic acid delivery in engineered human microlivers. Cell Metab. 29: 727-735.e3.
10. Almenar-Pérez, E., et al. 2020. Assessing diagnostic value of microRNAs from peripheral blood mononuclear cells and extracellular vesicles in Myalgic Encephalomyelitis/Chronic Fatigue syndrome. Sci. Rep. 10: 2064.

RESEARCH USE

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