SANTA CRUZ BIOTECHNOLOGY, INC.

CD81 (D-4): sc-166028

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. It 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 (D-4) is a mouse monoclonal antibody raised against amino acids 90-210 of CD81 of human origin.

PRODUCT

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

CD81 (D-4) is available conjugated to agarose (sc-166028 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166028 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166028 PE), fluorescein (sc-166028 FITC), Alexa Fluor® 488 (sc-166028 AF488), Alexa Fluor® 546 (sc-166028 AF546), Alexa Fluor® 594 (sc-166028 AF594) or Alexa Fluor® 647 (sc-166028 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166028 AF680) or Alexa Fluor® 790 (sc-166028 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CD81 (D-4) is recommended for detection of CD81 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), 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 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: JAR cell lysate: sc-2276, Jurkat whole cell lysate: sc-2204 or BJAB whole cell lysate: sc-2207.

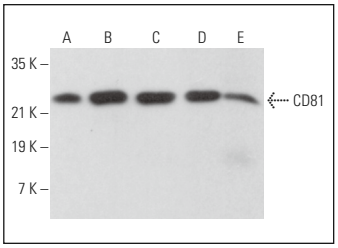
STORAGE

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

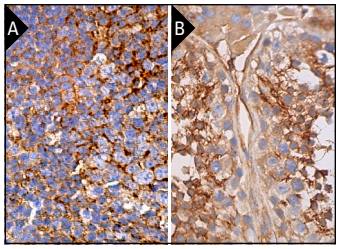
RESEARCH USE

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

DATA



CD81 (D-4): sc-166028. Western blot analysis of CD81 expression in JAR (**A**), Jurkat (**B**), SUP-T1 (**C**) and BJAB (**D**) whole cell lysates and rat thymus tissue extract (**E**).



CD81 (D-4): sc-166028. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing cytoplasmic and membrane staining of cells in germinal and non-germinal centers (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing membrane and cytoplasmic staining of cells in seminiferous ducts and cytoplasmic staining of Leydig cells (**B**).

SELECT PRODUCT CITATIONS

1. Turkki, P., et al. 2013. Cell susceptibility to baculovirus transduction and echovirus infection is modified by protein kinase C phosphorylation and vimentin organization. J. Virol. 87: 9822-9835.
2. Forterre, A., et al. 2014. Proteomic analysis of C2C12 myoblast and myotube exosome-like vesicles: a new paradigm for myoblast-myotube cross talk? PLoS ONE 9: e84153.
3. Guay, C., et al. 2015. Horizontal transfer of exosomal microRNAs transduce apoptotic signals between pancreatic β-cells. Cell Commun. Signal. 19: 17.
4. Ujino, S., et al. 2016. Hepatitis C virus utilizes VLDLR as a novel entry pathway. Proc. Natl. Acad. Sci. USA 113: 188-193.
5. Vardaki, I., et al. 2016. Periostin is identified as a putative metastatic marker in breast cancer-derived exosomes. Oncotarget 7: 74966-74978.
6. Gallo, A., et al. 2017. Global profiling of viral and cellular non-coding RNAs in Epstein-Barr virus-induced lymphoblastoid cell lines and released exosome cargos. Cancer Lett. 388: 334-343.
7. Stranska, R., et al. 2018. Comparison of membrane affinity-based method with size-exclusion chromatography for isolation of exosome-like vesicles from human plasma. J. Transl. Med. 16: 1.
8. Guay, C., et al. 2019. Lymphocyte-derived exosomal microRNAs promote pancreatic β cell death and may contribute to type 1 diabetes development. Cell Metab. 29: 348-361.e6.
9. Hartwig, S., et al. 2019. Exosomal proteins constitute an essential part of the human adipose tissue secretome. Biochim. Biophys. Acta Proteins Proteom. 1867: 140172.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.