SANTA CRUZ BIOTECHNOLOGY, INC.

CD177 (C-5): sc-376329

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Patients with polycythemia vera (PV), a neoplastic stem cell disorder that leads to excessive production of all myeloid cell lines, overexpress the cell surface antigen CD177, also designated NB1. The increased output, especially of red blood cells, increases whole blood viscosity and causes vascular occlusion and ischemia. Because of the marked upregulation of CD177 in PV patients, as compared to healthy individuals or those with other erythrocytosis-related conditions, analysis of this protein presents a useful tool for diagnosis and research into the mechanisms of PV.

CHROMOSOMAL LOCATION

Genetic locus: CD177 (human) mapping to 19q13.31; Cd177 (mouse) mapping to 7 A3.

SOURCE

CD177 (C-5) is a mouse monoclonal antibody raised against amino acids 27-247 mapping within an internal region of CD177 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.

CD177 (C-5) is available conjugated to agarose (sc-376329 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376329 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376329 PE), fluorescein (sc-376329 FITC), Alexa Fluor® 488 (sc-376329 AF488), Alexa Fluor® 546 (sc-376329 AF546), Alexa Fluor® 594 (sc-376329 AF594) or Alexa Fluor® 647 (sc-376329 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376329 AF680) or Alexa Fluor® 790 (sc-376329 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

CD177 (C-5) is recommended for detection of CD177 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 CD177 siRNA (h): sc-105189, CD177 siRNA (m): sc-142181, CD177 shRNA Plasmid (h): sc-105189-SH, CD177 shRNA Plasmid (m): sc-142181-SH, CD177 shRNA (h) Lentiviral Particles: sc-105189-V and CD177 shRNA (m) Lentiviral Particles: sc-142181-V.

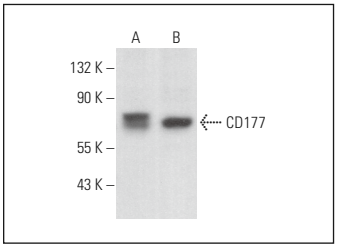
Molecular Weight of CD177: 58-64 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or MCF7 whole cell lysate: sc-2206.

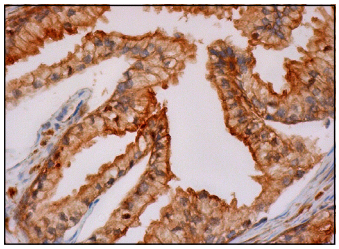
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CD177 (C-5): sc-376329. Western blot analysis of CD177 expression in Hep G2 (**A**) and MCF7 (**B**) whole cell lysates.



CD177 (C-5): sc-376329. Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing membrane and cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Li, Y., et al. 2015. Genetic mechanism of human neutrophil antigen 2 deficiency and expression variations. PLoS Genet. 11: e1005255.
2. Nasci, V.L., et al. 2023. Transcriptomic analysis identifies novel candidates in cardiorenal pathology mediated by chronic peritoneal dialysis. Sci. Rep. 13: 10051.

STORAGE

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

PROTOCOLS

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