

# CD177 (N-17): sc-27941

## 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.

## REFERENCES

1. Tefferi, A. 2003. Polycythemia vera: a comprehensive review and clinical recommendations. *Mayo Clin. Proc.* 78: 174-194.
2. Klippel, S., et al. 2003. Quantification of PRV-1 mRNA distinguishes polycythemia vera from secondary erythrocytosis. *Blood* 102: 3569-3574.
3. Dittmar, K., et al. 2003. Assessment of the relative number of copies of the gene encoding human neutrophil antigen-2a(HNA-2a), CD177, and a homologous pseudogene by quantitative real-time PCR. *Immunohematology* 19: 122-126.
4. Caruccio, L., et al. 2004. CD177 polymorphisms: correlation between high-frequency single nucleotide polymorphisms and neutrophil surface protein expression. *Transfusion* 44: 77-82.
5. Gohring, K., et al. 2004. Neutrophil CD177 (NB1 gp, HNA-2a) expression is increased in severe bacterial infections and polycythaemia vera. *Br. J. Haematol.* 126: 252-254.
6. Passamonti, F., et al. 2004. Clinical significance of neutrophil CD177 mRNA expression in Ph-negative chronic myeloproliferative disorders. *Br. J. Haematol.* 126: 650-656.

## CHROMOSOMAL LOCATION

Genetic locus: PRV1 (human) mapping to 19q13.31.

## SOURCE

CD177 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of CD177 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-27941 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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.

## APPLICATIONS

CD177 (N-17) is recommended for detection of CD177 of 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 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 shRNA Plasmid (h): sc-105189-SH and CD177 shRNA (h) Lentiviral Particles: sc-105189-V.

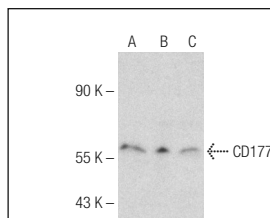
Molecular Weight of CD177: 58-64 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, HEL 92.1.7 cell lysate: sc-2270 or K-562 whole cell lysate: sc-2203.

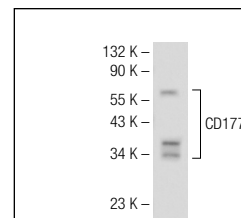
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



CD177 (N-17): sc-27941. Western blot analysis of CD177 expression in HEL 92.1.7 (A), K-562 (B) and CCRF-CEM (C) whole cell lysates.



CD177 (N-17): sc-27941. Western blot analysis of CD177 expression in human PBL whole cell lysate.

## PROTOCOLS

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Try **CD177 (C-1): sc-374291** or **CD177 (C-5): sc-376329**, our highly recommended monoclonal alternatives to CD177 (N-17).