



## ART4 (W-19): sc-74336

### BACKGROUND

ART4 (ADP-ribosyltransferase 4), also known as DO, DOK1 or CD297, is a 314 amino acid protein that is lipid-anchored to the cell membrane and belongs to the Arg-specific ADP-ribosyltransferase family. Expressed in spleen tissue, as well as in T cells, ART4 functions to catalyze both the NAD<sup>+</sup>-dependent conversion of protein-L-arginine to nicotinamide and N<sup>ω</sup>-(ADP-D-ribosyl)-protein-L-arginine and the NADP<sup>+</sup>-dependent conversion of protein-L-arginine to nicotinamide and N<sup>ω</sup>-(2'-phospho-ADP)-D-ribosyl)-protein-L-arginine. Via its catalytic activity, ART4 is responsible for the Dombrock blood group antigen system. The gene encoding ART4 maps to human chromosome 12, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome.

### REFERENCES

- Eiberg, H. and Mohr, J. 1996. Dombrock blood group (DO): assignment to chromosome 12p. *Hum. Genet.* 98: 518-521.
- Gubin, A.N., Njoroge, J.M., Wojda, U., Pack, S.D., Rios, M., Reid, M.E. and Miller, J.L. 2000. Identification of the Dombrock blood group glycoprotein as a polymorphic member of the ADP-ribosyltransferase gene family. *Blood* 96: 2621-2627.
- Mauthe, J., Coghlan, G. and Zelinski, T. 2000. Confirmation of the assignment of the Dombrock blood group locus (DO) to chromosome 12p: narrowing the boundaries to 12p12.3-p13.2. *Vox Sang.* 79: 53-56.
- Rios, M., Storry, J.R., Hue-Roye, K., Chung, A. and Reid, M.E. 2002. Two new molecular bases for the Dombrock null phenotype. *Br. J. Haematol.* 117: 765-767.
- Glowacki, G., Braren, R., Firner, K., Nissen, M., Kühl, M., Reche, P., Bazan, F., Cetkovic-Cvrlje, M., Leiter, E., Haag, F. and Koch-Nolte, F. 2002. The family of toxin-related ecto-ADP-ribosyltransferases in humans and the mouse. *Protein Sci.* 11: 1657-1670.
- Reid, M.E. 2003. The Dombrock blood group system: a review. *Transfusion* 43: 107-114.
- Grahner, A., Friedrich, M., Engeland, K. and Hauschildt, S. 2005. Analysis of mono-ADP-ribosyltransferase 4 gene expression in human monocytes: splicing pattern and potential regulatory elements. *Biochim. Biophys. Acta* 1730: 173-186.
- Hashmi, G., Shariff, T., Seul, M., Vissavajhala, P., Hue-Roye, K., Charles-Pierre, D., Lomas-Francis, C., Chaudhuri, A. and Reid, M.E. 2005. A flexible array format for large-scale, rapid blood group DNA typing. *Transfusion* 45: 680-688.
- Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 110600. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

### CHROMOSOMAL LOCATION

Genetic locus: Art4 (mouse) mapping to 6 G1.

### RESEARCH USE

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

### SOURCE

ART4 (W-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ART4 of mouse 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-74336 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

ART4 (W-19) is recommended for detection of ART4 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 ART4 siRNA (m): sc-72540, ART4 shRNA Plasmid (m): sc-72540-SH and ART4 shRNA (m) Lentiviral Particles: sc-72540-V.

Molecular Weight of ART4: 36 kDa.

### 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) 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.

### 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](http://www.scbt.com) or our catalog for detailed protocols and support products.