ART3 (h): 293T Lysate: sc-173099



The Power to Question

BACKGROUND

Mono-ADP-ribosylation is one of the posttranslational protein modifications regulating cellular metabolism (e.g. nitrogen fixation) in prokaryotes. Mono-ADP-ribosylation is a process in which the ADP-ribose moiety of nicotinamide adenine dinucleotide is transferred to an acceptor amino acid. Five mammalian ADP-ribosyltransferases (ART1-ART5) have been cloned and expression is restricted to tissues such as cardiac and skeletal muscle, leukocytes, brain and testis. ART3 (ADP-ribosyltransferase 3), also known as ecto-ADP-ribosyltransferase 3, is a testis specific membrane protein that does not appear to have ADP-ribosyltransferase activity. It lacks the R-S-EXE active site motif and is therefore unable to catalyze the reaction. ART3 is predominantly found in spermatocytes and may play a role in spermatogenesis.

REFERENCES

- Okazaki, I.J., Zolkiewska, A., Nightingale, M.S. and Moss, J. 1994. Immunological and structural conservation of mammalian skeletal muscle glycosylphosphatidylinositol-linked ADP-ribosyltransferases. Biochemistry 33: 12828-13836.
- Koch-Nolte, F., Haag, F., Braren, R., Kuhl, M., Hoovers, J., Balasubramanian, S., Bazan, F. and Thiele, H.G. 1997. Two novel human members of an emerging mammalian gene family related to mono-ADP-ribosylating bacterial toxins. Genomics 39: 370-376.
- Braren, R., Glowacki, G., Nissen, M., Haag, F. and Koch-Nolte, F. 1998.
 Molecular characterization and expression of the gene for mouse NAD+: arginine ecto-mono (ADP-ribosyl) transferase, ART1. Biochem. J. 336: 561-568.
- Okazaki, I.J. and Moss, J. 1999. Characterization of glycosylphosphatidylinositiol-anchored, secreted, and intracellular vertebrate mono-ADP-ribosyltransferases. Annu. Rev. Nutr. 19: 485-50.
- Koch-Nolte, F., Glowacki, G., Bannas, P., Braasch, F., Dubberke, G., Ortolan, E., Funaro, A., Malavasi, F. and Haag, F. 2005. Use of genetic immunization to raise antibodies recognizing toxin-related cell surface ADPribosyltransferases in native conformation. Cell. Immunol. 236: 66-71.
- Friedrich, M., Grahnert, A., Klein, C., Tschöp, K., Engeland, K. and Hauschildt, S. 2006. Genomic organization and expression of the human mono-ADP-ribosyltransferase ART3 gene. Biochim. Biophys. Acta 1759: 270-280.
- Friedrich, M., Grahnert, A., Paasch, U., Tannapfel, A., Koch-Nolte, F. and Hauschildt, S. 2006. Expression of toxin-related human mono-ADP-ribosyltransferase 3 in human testes. Asian J. Androl. 8: 281-287.
- 8. Muller, O., Pradervand, S., Berger, S., Centeno, G., Milet, A., Nicod, P., Pedrazzini, T., Tronche, F., Schütz, G., Chien, K., Rossier, B.C. and Firsov, D. 2007. Identification of corticosteroid-regulated genes in cardiomyocytes by serial analysis of gene expression. Genomics 89: 370-377.
- 9. Okada, H., Tajima, A., Shichiri, K., Tanaka, A., Tanaka, K. and Inoue, I. 2008. Genome-wide expression of azoospermia testes demonstrates a specific profile and implicates ART3 in genetic susceptibility. PLoS Genet. 4: e26-e26.

CHROMOSOMAL LOCATION

Genetic locus: ART3 (human) mapping to 4g21.1.

PRODUCT

ART3 (h): 293T Lysate represents a lysate of human ART3 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

ART3 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive ART3 antibodies. Recommended use: 10-20 µl per lane.

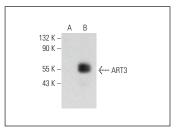
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

ART3 (G-10): sc-515157 is recommended as a positive control antibody for Western Blot analysis of enhanced human ART3 expression in ART3 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-lgG κ BP-HRP: sc-516102 or m-lgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



ART3 (G-10): sc-515157. Western blot analysis of ART3 expression in non-transfected: sc-117752 (A) and human ART3 transfected: sc-173099 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

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