SANTA CRUZ BIOTECHNOLOGY, INC.

ART3 (G-10): sc-515157

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

1. Okazaki, I.J., et al. 1994. Immunological and structural conservation of mammalian skeletal muscle glycosylphosphatidylinositol-linked ADP-ribosyltransferases. Biochemistry 33: 12828-13836.
2. Koch-Nolte, F., et al. 1997. Two novel human members of an emerging mammalian gene family related to mono-ADP-ribosylating bacterial toxins. Genomics 39: 370-376.
3. Braren, R., et al. 1998. Molecular characterization and expression of the gene for mouse NAD^+: arginine ecto-mono (ADP-ribosyl) transferase, ART1. Biochem. J. 336: 561-568.
4. Okazaki, I.J. and Moss, J. 1999. Characterization of glycosylphosphatidylinositiol-anchored, secreted, and intracellular vertebrate mono-ADP-ribosyltransferases. Annu. Rev. Nutr. 19: 485-509.

CHROMOSOMAL LOCATION

Genetic locus: ART3 (human) mapping to 4q21.1; Art3 (mouse) mapping to 5 E2.

SOURCE

ART3 (G-10) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of ART3 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.

ART3 (G-10) is available conjugated to agarose (sc-515157 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515157 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515157 PE), fluorescein (sc-515157 FITC), Alexa Fluor® 488 (sc-515157 AF488), Alexa Fluor® 546 (sc-515157 AF546), Alexa Fluor® 594 (sc-515157 AF594) or Alexa Fluor® 647 (sc-515157 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515157 AF680) or Alexa Fluor® 790 (sc-515157 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

ART3 (G-10) is recommended for detection of ART3 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ART3 siRNA (h): sc-72537, ART3 siRNA (m): sc-72538, ART3 shRNA Plasmid (h): sc-72537-SH, ART3 shRNA Plasmid (m): sc-72538-SH, ART3 shRNA (h) Lentiviral Particles: sc-72537-V and ART3 shRNA (m) Lentiviral Particles: sc-72538-V.

Molecular Weight (predicted) of ART3: 44 kDa.

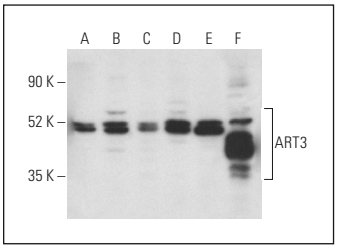
Molecular Weight (observed) of ART3: 50 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, F9 cell lysate: sc-2245 or SJRH30 cell lysate: sc-2287.

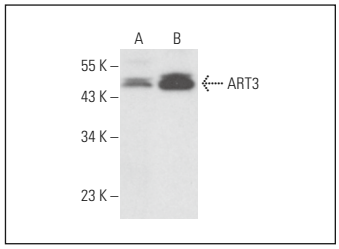
RECOMMENDED SUPPORT REAGENTS

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.

DATA



ART3 (G-10): sc-515157. Western blot analysis of ART3 expression in SJRH30 (**A**), SK-MEL-28 (**B**), NTERA-2 cl.D1 (**C**), K-562 (**D**) and F9 (**E**) whole cell lysates and human testis tissue extract (**F**). Detection reagent used: m-IgG_1 BP-HRP: sc-525408.



ART3 (G-10): sc-515157. Western blot analysis of ART3 expression in SJRH30 (**A**) and F9 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Li, X., et al. 2021. Insights into the mechanism of bovine spermiogenesis based on comparative transcriptomic studies. Animals 11: 80.

RESEARCH USE

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