

ART5 (S-15): sc-131417

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 each ART is expressed in different tissues. ART5 (ADP-ribosyltransferase 5), also known as Ecto-ADP-ribosyltransferase 5, is a 292 amino acid secretory protein that is expressed in testis, heart, skeletal muscle and lymphoma. Functionally, ART5 is implicated to play a role in cell signaling and metabolism cascades. Two isoforms of ART5 exist as a result of alternative splicing events.

REFERENCES

- Okazaki, I.J., et al. 1994. Immunological and structural conservation of mammalian skeletal muscle glycosylphosphatidylinositol-linked ADP-ribosyltransferases. *Biochemistry* 33: 12828-13836.
- 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.
- Okazaki, I.J. and Moss, J. 1999. Characterization of glycosylphosphatidylinositol-anchored, secreted, and intracellular vertebrate mono-ADP-ribosyltransferases. *Annu. Rev. Nutr.* 19: 485-509.
- Seman, M., et al. 2004. Ecto-ADP-ribosyltransferases (ARTs): emerging actors in cell communication and signaling. *Curr. Med. Chem.* 11: 857-872.
- Koch-Nolte, F., et al. 2005. Use of genetic immunization to raise antibodies recognizing toxin-related cell surface ADP-ribosyltransferases in native conformation. *Cell. Immunol.* 236: 66-71.
- Friedrich, M., et al. 2006. Genomic organization and expression of the human mono-ADP-ribosyltransferase ART3 gene. *Biochim. Biophys. Acta* 1759: 270-280.
- Friedrich, M., et al. 2006. Expression of toxin-related human mono-ADP-ribosyltransferase 3 in human testes. *Asian J. Androl.* 8: 281-287.
- Balducci, E., et al. 2007. Expression and selective up-regulation of toxin-related mono ADP-ribosyltransferases by pathogen-associated molecular patterns in alveolar epithelial cells. *FEBS Lett.* 581: 4199-4204.
- Muller, O., et al. 2007. Identification of corticosteroid-regulated genes in cardiomyocytes by serial analysis of gene expression. *Genomics* 89: 370-377.

CHROMOSOMAL LOCATION

Genetic locus: ART5 (human) mapping to 11p15.4; Art5 (mouse) mapping to 7 E3.

SOURCE

ART5 (S-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ART5 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-131417 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ART5 (S-15) is recommended for detection of ART5 isoforms 1 and 2 of mouse, rat and human 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); non cross-reactive with other ART family members.

ART5 (S-15) is also recommended for detection of ART5 isoforms 1 and 2 in additional species, including equine and bovine.

Suitable for use as control antibody for ART5 siRNA (h): sc-96786, ART5 siRNA (m): sc-141280, ART5 shRNA Plasmid (h): sc-96786-SH, ART5 shRNA Plasmid (m): sc-141280-SH, ART5 shRNA (h) Lentiviral Particles: sc-96786-V and ART5 shRNA (m) Lentiviral Particles: sc-141280-V.

Molecular Weight of ART5: 32 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.

RESEARCH USE

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

PROTOCOLS

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