



ART1 (A-20): sc-20254

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 posttranslational modification of proteins 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. ART1 and ART2 are glycosylphosphatidylinositol (GPI)-anchored ectoenzymes expressed at the cell surface of rat and mouse T lymphocytes. ART1 is a 40,000 M(r) protein that is expressed in human skeletal muscle. In skeletal muscle and lymphocytes, ART1 modifies specific members of the integrin family of adhesion molecules, suggesting that ADP-ribosylation affects cell-matrix or cell-cell interactions. The gene which encodes ART1 maps to human chromosome 11p15.

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. 1996. Assignment of the human and mouse genes for muscle ecto mono(ADPriboseyl)transferase to a conserved linkage group on human chromosome 11p15 and mouse chromosome 7. *Genomics* 36: 215-216.
- 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.
- 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.
- Okazaki, I.J., et al. 1999. Characterization of glycosylphosphatidylinositol-anchored, secreted, and intracellular vertebrate mono-ADP-ribosyltransferases. *Annu. Rev. Nutr.* 19: 485-509.
- LocusLink Report (LocusID: 601625). <http://www.ncbi.nlm.nih.gov/LocusLink>

SOURCE

ART1 (A-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ART1 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-20254 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.

APPLICATIONS

ART1 (A-20) is recommended for detection of ART1 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).

Molecular Weight of ART1: 36/40 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.

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.