

GART (H-300): sc-98535

BACKGROUND

Purines are critical for energy metabolism, cell signaling and cell reproduction and also function as precursors for coenzymes, energy transfer molecules, regulatory factors and proteins involved in RNA and DNA synthesis. GART (GAR transformylase), also referred to as AIRS, GARS, PAIS, PGFT, PRGS or GARTF, is 1,010 amino acids in length and is a key folate-dependent trifunctional enzyme with phosphoribosylglycinamide formyltransferase, phosphoribosylglycinamide synthetase and AICAR (phosphoribosylaminoimidazole synthetase) activity required for *de novo* purine biosynthesis. Cancer cells require considerable amounts of purines to sustain their accelerated growth and GART is, therefore, a target for cancer chemotherapy. GART is highly conserved in vertebrates. Two isoforms of GART are expressed due to alternative splicing events.

REFERENCES

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4. Brodsky, G., et al. 1997. The human GARS-AIRS-GART gene encodes two proteins which are differentially expressed during human brain development and temporally overexpressed in cerebellum of individuals with Down syndrome. *Hum. Mol. Genet.* 6: 2043-2050.
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7. Liu, C., et al. 2000. The unexpected catalytic properties of a heterodimer of GAR transformylase. *Bioorg. Chem.* 28: 316-323.
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CHROMOSOMAL LOCATION

Genetic locus: GART (human) mapping to 21q22.11; Gart (mouse) mapping to 16 C3.3.

RESEARCH USE

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

SOURCE

GART (H-300) is a rabbit polyclonal antibody raised against amino acids 61-360 mapping near the N-terminus of GART 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.

APPLICATIONS

GART (H-300) is recommended for detection of GART of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

GART (H-300) is also recommended for detection of GART in additional species, including equine, canine, bovine and porcine.

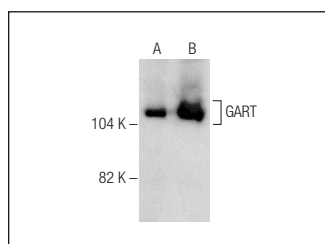
Suitable for use as control antibody for GART siRNA (h): sc-91395, GART siRNA (m): sc-145331, GART shRNA Plasmid (h): sc-91395-SH, GART shRNA Plasmid (m): sc-145331-SH, GART shRNA (h) Lentiviral Particles: sc-91395-V and GART shRNA (m) Lentiviral Particles: sc-145331-V.

Molecular Weight of GART long isoform: 110 kDa.

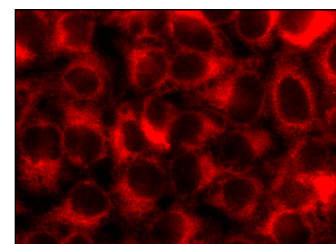
Molecular Weight of GART short isoform: 46 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HeLa nuclear extract: sc-2120 or A-431 whole cell lysate: sc-2201.

DATA



GART (H-300): sc-98535. Western blot analysis of GART expression in A-431 (A) and K-562 (B) whole cell lysates.



GART (H-300): sc-98535. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

STORAGE

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

MONOS
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Try **GART (D-4): sc-166379** or **GART (F-8): sc-166447**, our highly recommended monoclonal alternatives to GART (H-300).