

cyt19 (D-1): sc-376537



The Power to Question

BACKGROUND

Formation of methylated metabolites is a critical step in the metabolism of inorganic arsenic. Arsenite methyltransferase (cyt19) is localized to the cytoplasm and operates in the transfer of a methyl group from AdoMet to trivalent arsenicals producing methylated and dimethylated arsenicals. It methylates arsenite to form methylarsonate which is reduced to methylarsonite. Methylarsonite acts as a substrate and is converted into a much less toxic compound dimethylarsinate. cyt19 is highly expressed in liver. Inherited variation in cyt19 may contribute to variation in arsenic metabolism and possibly arsenic-dependent carcinogenesis in humans.

CHROMOSOMAL LOCATION

Genetic locus: AS3MT (human) mapping to 10q24.32; As3mt (mouse) mapping to 19 C3.

SOURCE

cyt19 (D-1) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of cyt19 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

cyt19 (D-1) is available conjugated to agarose (sc-376537 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376537 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376537 PE), fluorescein (sc-376537 FITC), Alexa Fluor® 488 (sc-376537 AF488), Alexa Fluor® 546 (sc-376537 AF546), Alexa Fluor® 594 (sc-376537 AF594) or Alexa Fluor® 647 (sc-376537 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376537 AF680) or Alexa Fluor® 790 (sc-376537 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

cyt19 (D-1) is recommended for detection of cyt19 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), immunohistochemistry (including paraffin-embedded sections) (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 cyt19 siRNA (h): sc-60494, cyt19 siRNA (m): sc-60495, cyt19 shRNA Plasmid (h): sc-60494-SH, cyt19 shRNA Plasmid (m): sc-60495-SH, cyt19 shRNA (h) Lentiviral Particles: sc-60494-V and cyt19 shRNA (m) Lentiviral Particles: sc-60495-V.

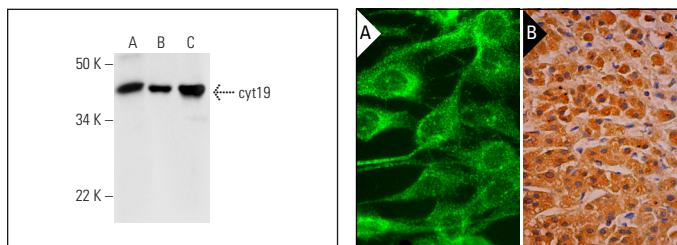
Molecular Weight of cyt19: 42 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, mouse liver extract: sc-2256 or mouse heart extract: sc-2254.

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



cyt19 (D-1): sc-376537. Western blot analysis of cyt19 expression in NIH/3T3 whole cell lysate (A) and mouse heart (B) and mouse liver (C) tissue extracts.

cyt19 (D-1): sc-376537. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Allan, A.M., et al. 2015. Sex-dependent effects of developmental arsenic exposure on methylation capacity and methylation regulation of the glucocorticoid receptor system in the embryonic mouse brain. *Toxicol. Rep.* 2: 1376-1390.
- Qiu, T., et al. 2022. AS3MT facilitates NLRP3 inflammasome activation by m⁶A modification during arsenic-induced hepatic Insulin resistance. *Cell Biol. Toxicol.* E-published.

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.

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