

GAS41 (C-10): sc-393708

BACKGROUND

Gene amplification is associated with tumor stage and progression in human gliomas. Several amplified loci are identified and comprise multiple genes. The glioma amplified sequence 41 (GAS41) is an evolutionarily conserved eukaryotic protein found in diverse species. GAS41 is related to the AF-9 and ENL proteins, which are putative transcription factors in some acute leukemias, and interacts with a component of the nuclear matrix, NuMA, in interphase cells. GAS41 has a dotted staining pattern in interphase nuclei and a uniform distribution in mitotic cells. GAS41 is ubiquitously expressed, with the highest levels of expression in human brain. In neuroblastoma, GAS41 is located in the nucleoli, but not in the nucleoplasm. GAS41 also binds to the MLL fusion partner AF10, which is involved in two distinct chromosomal translocations associated with hematologic malignancy. In addition, GAS41 interacts with INI1 (integrase interactor), which is a human homologue of the yeast SNF5 protein, a component of the SWI/SNF complex. The GAS41 gene maps to human chromosome 12q15.

CHROMOSOMAL LOCATION

Genetic locus: YEATS4 (human) mapping to 12q15; Yeats4 (mouse) mapping to 10 D2.

SOURCE

GAS41 (C-10) is a mouse monoclonal antibody raised against amino acids 101-227 mapping at the C-terminus of GAS41 of human 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.

GAS41 (C-10) is available conjugated to agarose (sc-393708 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393708 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393708 PE), fluorescein (sc-393708 FITC), Alexa Fluor® 488 (sc-393708 AF488), Alexa Fluor® 546 (sc-393708 AF546), Alexa Fluor® 594 (sc-393708 AF594) or Alexa Fluor® 647 (sc-393708 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393708 AF680) or Alexa Fluor® 790 (sc-393708 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

GAS41 (C-10) is recommended for detection of GAS41 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 GAS41 siRNA (h): sc-77331, GAS41 siRNA (m): sc-145334, GAS41 shRNA Plasmid (h): sc-77331-SH, GAS41 shRNA Plasmid (m): sc-145334-SH, GAS41 shRNA (h) Lentiviral Particles: sc-77331-V and GAS41 shRNA (m) Lentiviral Particles: sc-145334-V.

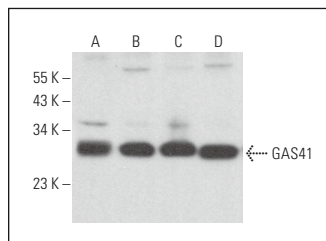
Molecular Weight of GAS41: 26 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, A549 cell lysate: sc-2413 or Jurkat whole cell lysate: sc-2204.

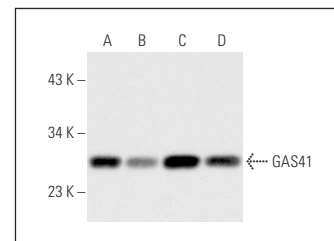
STORAGE

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

DATA



GAS41 (C-10): sc-393708. Western blot analysis of GAS41 expression in ZR-75-1 (A), MM142 (B), NIH/3T3 (C) and L6 (D) whole cell lysates.



GAS41 (C-10): sc-393708. Western blot analysis of GAS41 expression in Hep G2 (A), A549 (B), Jurkat (C) and RAW 264.7 (D) whole cell lysates.

SELECT PRODUCT CITATIONS

- Cho, H.J., et al. 2018. GAS41 recognizes diacetylated Histone H3 through a bivalent binding mode. *ACS Chem. Biol.* 13: 2739-2746.
- Kiuchi, J., et al. 2018. Overexpression of YEATS4 contributes to malignant outcomes in gastric carcinoma. *Am. J. Cancer Res.* 8: 2436-2452.
- Ma, X.R., et al. 2021. Discovery of selective small-molecule inhibitors for the ENL YEATS domain. *J. Med. Chem.* 64: 10997-11013.
- Listunov, D., et al. 2021. Development of potent dimeric inhibitors of GAS41 YEATS domain. *Cell Chem. Biol.* 28: 1716-1727.e6.
- Liu, N., et al. 2023. Histone H3 lysine 27 crotonylation mediates gene transcriptional repression in chromatin. *Mol. Cell* 83: 2206-2221.e11.
- Kikuchi, M., et al. 2023. GAS41 promotes H2A.Z deposition through recognition of the N terminus of Histone H3 by the YEATS domain. *Proc. Natl. Acad. Sci. USA* 120: e2304103120.
- Wang, Z., et al. 2024. GAS41 modulates ferroptosis by anchoring NRF2 on chromatin. *Nat. Commun.* 15: 2531.
- Xie, M., et al. 2024. Targeting the KAT8/YEATS4 axis represses tumor growth and increases cisplatin sensitivity in bladder cancer. *Adv. Sci.* 11: e2310146.
- Wang, Z., et al. 2024. YEATS domain-containing protein GAS41 regulates nuclear shape by working in concert with BRD2 and the mediator complex in colorectal cancer. *Pharmacol. Res.* 206: 107283.

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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