

# GAS41 (YEATB1A8): sc-81278

## 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 AF-10, which is involved in two distinct chromosomal translocations associated with hematologic malignancy. In addition, GAS41 interacts with INI1 (integrase interactor 1), which is a human homolog of the yeast Snf5 protein, a component of the SWI/SNF complex. The GAS41 gene maps to human chromosome 12q15.

## REFERENCES

- Fischer, U., Meltzer, P. and Meese, E. 1996. Twelve amplified and expressed genes localized in a single domain in glioma. *Hum. Genet.* 98: 625-628.
- Gracia, E., Fischer, U., ElKahloun, A., Trent, J. M., Meese, E. and Meltzer, P. S. 1996. Isolation of genes amplified in human cancers by microdissection mediated cDNA capture. *Hum. Mol. Genet.* 5: 595-600.
- Fischer, U., Heckel, D., Michel, A., Janka, M., Hulsebos, T. and Meese, E. 1997. Cloning of a novel transcription factor-like gene amplified in human glioma including astrocytoma grade I. *Hum. Mol. Genet.* 6: 1817-1822.
- Harborth, J., Weber, K. and Osborn, M. 2000. GAS41, a highly conserved protein in eukaryotic nuclei, binds to NuMA. *J. Biol. Chem.* 275: 31979-31985.
- Munnia, A., Schutz, N., Romeike, B.F., Maldener, E., Glass, B., Maas, R., Nastainczyk, W., Feiden, W., Fischer, U. and Meese, E. 2001. Expression, cellular distribution and protein binding of the glioma amplified sequence (GAS41), a highly conserved putative transcription factor. *Oncogene* 20: 4853-4863.
- Debernardi, S., Bassini, A., Jones, L.K., Chaplin, T., Linder, B., de Bruijn, D.R., Meese, E. and Young, B.D. 2002. The MLL fusion partner AF-10 binds GAS41, a protein that interacts with the human SWI/SNF complex. *Blood* 99: 275-281.

## CHROMOSOMAL LOCATION

Genetic locus: YEATS4 (human) mapping to 12q15.

## SOURCE

GAS41 (YEATB1A8) is a mouse monoclonal antibody raised against a recombinant protein corresponding to an internal region of GAS41 of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

## APPLICATIONS

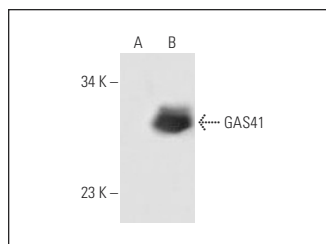
GAS41 (YEATB1A8) is recommended for detection of GAS41 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for GAS41 siRNA (h): sc-77331, GAS41 shRNA Plasmid (h): sc-77331-SH and GAS41 shRNA (h) Lentiviral Particles: sc-77331-V.

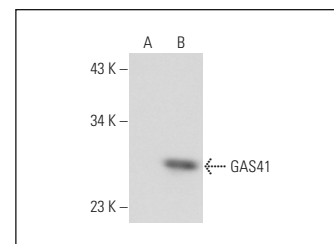
Molecular Weight of GAS41: 26 kDa.

Positive Controls: GAS41 (h): 293 Lysate: sc-110558 or Hep G2 cell lysate: sc-2227.

## DATA



GAS41 (YEATB1A8): sc-81278. Western blot analysis of GAS41 expression in non-transfected: sc-110760 (A) and human GAS41 transfected: sc-110558 (B) 293 whole cell lysates.



GAS41 (YEATB1A8): sc-81278. Western blot analysis of GAS41 expression in non-transfected: sc-110760 (A) and human GAS41 transfected: sc-110558 (B) 293 whole cell lysates.

## SELECT PRODUCT CITATIONS

- Miano, J.M., Kitchen, C.M., Chen, J., Maltby, K.M., Kelly, L.A., Weiler, H., Krahe, R., Ashworth, L.K. and Garcia, E. 2002. Expression of human smooth muscle calponin in transgenic mice revealed with a bacterial artificial chromosome. *Am. J. Physiol. Heart Circ. Physiol.* 282: H1793-H1803.
- Huang, G., Jiang, H., Lin, Y., Wu, Y., Cai, W., Shi, B., Luo, Y., Jian, Z. and Zhou, X. 2018. IncAKHE enhances cell growth and migration in hepatocellular carcinoma via activation of NOTCH2 signaling. *Cell Death Dis.* 9: 487.

## STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.