SANTA CRUZ BIOTECHNOLOGY, INC.

Gas8 (E-11): sc-393638

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Gas8 (growth arrest-specific 8), also known as Gas11, is a 478 amino acid protein that localizes to the Golgi apparatus, as well as to the cytoplasm and the flagellar basal body, and belongs to the growth arrest-specific protein family. Expressed in liver, heart and skeletal muscle with lower levels present in lung, brain, kidney and placenta, Gas8 functions as a cytoskeletal linker that binds microtubules and is thought to play a role in axonemal and non-axonemal dynein regulation. Gas8 may also be involved in spermatozoa motility and, when defective, may be associated with infertility in males lacking gametocytes. The gene encoding Gas8 maps to a region on human chromosome 16 that is frequently deleted in breast and prostate cancer, suggesting a role for Gas8 in tumorigenesis.

REFERENCES

1. Whitmore, S.A., et al. 1998. Characterization and screening for mutations of the growth arrest-specific 11 (Gas11) and C16orf3 genes at 16q24.3 in breast cancer. Genomics 52: 325-331.
2. Yeh, S.D., et al. 2002. Isolation and properties of Gas8, a growth arrest-specific gene regulated during male gametogenesis to produce a protein associated with the sperm motility apparatus. J. Biol. Chem. 277: 6311-6317.
3. Ralston, K.S. and Hill, K.L. 2006. Trypanin, a component of the flagellar Dynein regulatory complex, is essential in bloodstream form African trypanosomes. PLoS Pathog. 2: e101.
4. Colantonio, J.R., et al. 2006. Expanding the role of the dynein regulatory complex to non-axonemal functions: association of GAS11 with the Golgi apparatus. Traffic 7: 538-548.
5. Bekker, J.M., et al. 2007. Direct interaction of Gas11 with microtubules: implications for the dynein regulatory complex. Cell Motil. Cytoskeleton 64: 461-473.
6. Nishimura, N., et al. 2008. Interaction of Rab3B with microtubule-binding protein Gas8 in NIH 3T3 cells. Arch. Biochem. Biophys. 474: 136-142.
7. Colantonio, J.R., et al. 2009. The dynein regulatory complex is required for ciliary motility and otolith biogenesis in the inner ear. Nature 457: 205-209.
8. Online Mendelian Inheritance in Man, OMIM™. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 605178. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: GAS8 (human) mapping to 16q24.3; Gas8 (mouse) mapping to 8 E2.

SOURCE

Gas8 (E-11) is a mouse monoclonal antibody raised against amino acids 292-478 mapping at the C-terminus of Gas8 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Gas8 (E-11) is recommended for detection of Gas8 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 Gas8 siRNA (h): sc-75107, Gas8 siRNA (m): sc-75108, Gas8 shRNA Plasmid (h): sc-75107-SH, Gas8 shRNA Plasmid (m): sc-75108-SH, Gas8 shRNA (h) Lentiviral Particles: sc-75107-V and Gas8 shRNA (m) Lentiviral Particles: sc-75108-V.

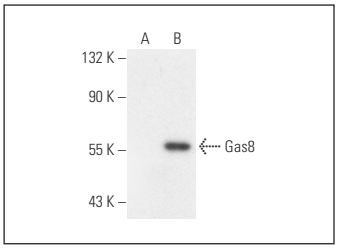
Molecular Weight of Gas8: 60 kDa.

Positive Controls: Gas8 (m): 293T Lysate: sc-120423.

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.

DATA



Gas8 (E-11): sc-393638. Western blot analysis of Gas8 expression in non-transfected: sc-117752 (**A**) and mouse Gas8 transfected: sc-120423 (**B**) 293T whole cell lysates.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.