

Gle1 (G-9): sc-514796

BACKGROUND

Protein transport across the nucleus is a selective, multi-step process involving several cytoplasmic factors that mediate protein passage through the nuclear pore complex (NPC). Gle1, also known as GLE1L, is a 698 amino acid protein that localizes to both the nucleus and the cytoplasm and belongs to the Gle1 family. Expressed as two alternatively spliced isoforms, Gle1 associates with the NPC and is required for the transport of poly(A)-containing mRNAs from the nucleus to the cytoplasm. Defects in the gene encoding Gle1 are the cause of lethal congenital contracture syndrome type 1 (LCCS1) and lethal arthrogryposis with anterior horn cell disease (LAAHD), the former of which is characterized by early fetal hydrops and akinesia, micrognathia, pulmonary hypoplasia, pterygia and prenatal death, while the latter is associated with respiratory failure.

REFERENCES

1. Watkins, J.L., et al. 1998. The human homologue of *Saccharomyces cerevisiae* Gle1p is required for poly(A)⁺ RNA export. *Proc. Natl. Acad. Sci. USA* 95: 6779-6784.
2. Kendirgi, F., et al. 2003. An essential role for hGle1 nucleocytoplasmic shuttling in mRNA export. *J. Cell Biol.* 160: 1029-1040.
3. Rayala, H.J., et al. 2004. The mRNA export factor human Gle1 interacts with the nuclear pore complex protein Nup155. *Mol. Cell. Proteomics* 3: 145-155.
4. Kendirgi, F., et al. 2005. Interaction between the shuttling mRNA export factor Gle1 and the nucleoporin hCG1: a conserved mechanism in the export of Hsp70 mRNA. *Mol. Biol. Cell* 16: 4304-4315.
5. Kutay, U. and Panse, V.G. 2008. Gle1 does double duty. *Cell* 134: 564-566.

CHROMOSOMAL LOCATION

Genetic locus: GLE1 (human) mapping to 9q34.11; Gle1 (mouse) mapping to 2 B.

SOURCE

Gle1 (G-9) is a mouse monoclonal antibody raised against amino acids 399-698 mapping at the C-terminus of Gle1 of human origin.

PRODUCT

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

Gle1 (G-9) is available conjugated to agarose (sc-514796 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514796 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514796 PE), fluorescein (sc-514796 FITC), Alexa Fluor[®] 488 (sc-514796 AF488), Alexa Fluor[®] 546 (sc-514796 AF546), Alexa Fluor[®] 594 (sc-514796 AF594) or Alexa Fluor[®] 647 (sc-514796 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-514796 AF680) or Alexa Fluor[®] 790 (sc-514796 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Gle1 (G-9) is recommended for detection of Gle1 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 Gle1 siRNA (h): sc-75138, Gle1 siRNA (m): sc-75139, Gle1 shRNA Plasmid (h): sc-75138-SH, Gle1 shRNA Plasmid (m): sc-75139-SH, Gle1 shRNA (h) Lentiviral Particles: sc-75138-V and Gle1 shRNA (m) Lentiviral Particles: sc-75139-V.

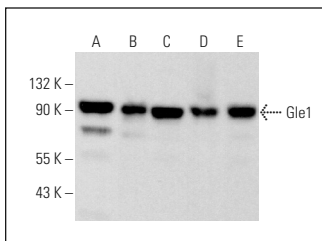
Molecular Weight of Gle1: 75 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or HL-60 whole cell lysate: sc-2209.

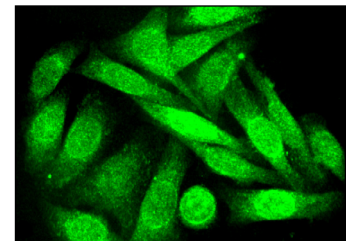
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-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-IgGλ BP-FITC: sc-516185 or m-IgGλ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



Gle1 (G-9): sc-514796. Western blot analysis of Gle1 expression in HeLa (A), HL-60 (B), K-562 (C), THP-1 (D) and AN3 CA (E) whole cell lysates. Detection reagent used: m-IgGλ BP-HRP (Cruz Marker): sc-516132-CM.



Gle1 (G-9): sc-514796. Immunofluorescence staining of formalin-fixed SW480 cells showing nuclear and cytoplasmic localization.

STORAGE

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

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.