

Gle1 (H-300): sc-98363

BACKGROUND

Protein transport across the nucleus is a selective, multistep 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., Murphy, R., Emtage, J.L. and Wenthe, S.R. 1998. The human homologue of *Saccharomyces cerevisiae* Gle1p is required for polyA⁺ RNA export. *Proc. Natl. Acad. Sci. USA* 95: 6779-6784.
2. Kendirgi, F., Barry, D.M., Griffis, E.R., Powers, M.A. and Wenthe, S.R. 2003. An essential role for hGle1 nucleocytoplasmic shuttling in mRNA export. *J. Cell Biol.* 160: 1029-1040.
3. Rayala, H.J., Kendirgi, F., Barry, D.M., Majerus, P.W. and Wenthe, S.R. 2004. The mRNA export factor human Gle1 interacts with the nuclear pore complex protein Nup155. *Mol. Cell. Proteomics* 3: 145-155.
4. Kendirgi, F., Rexer, D.J., Alcázar-Román, A.R., Onishko, H.M. and Wenthe, S.R. 2005. Interaction between the shuttling mRNA export factor Gle1 and the nucleoporin hCG1: a conserved mechanism in the export of HSP 70 mRNA. *Mol. Biol. Cell* 16: 4304-4315.
5. Kutay, U. and Panse, V.G. 2008. Gle1 does double duty. *Cell* 134: 564-566.
6. Bolger, T.A., Folkmann, A.W., Tran, E.J. and Wenthe, S.R. 2008. The mRNA export factor Gle1 and inositol hexakisphosphate regulate distinct stages of translation. *Cell* 134: 624-633.

CHROMOSOMAL LOCATION

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

SOURCE

Gle1 (H-300) is a rabbit polyclonal antibody raised against amino acids 399-698 mapping at the C-terminus of Gle1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Gle1 (H-300) is recommended for detection of Gle1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

Gle1 (H-300) is also recommended for detection of Gle1 in additional species, including equine, canine, bovine and porcine.

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.

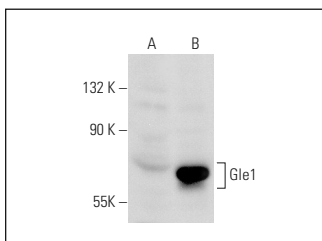
Molecular Weight of Gle1: 75 kDa.

Positive Controls: Gle1 (h): 293T Lysate: sc-171697 or mouse thymus extract: sc-2406.

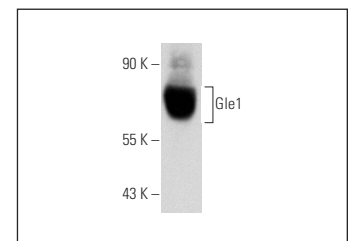
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Gle1 (H-300): sc-98363. Western blot analysis of Gle1 expression in non-transfected: sc-117752 (A) and human Gle1 transfected: sc-171697 (B) 293T whole cell lysates.



Gle1 (H-300): sc-98363. Western blot analysis of Gle1 expression in mouse thymus tissue extract.

RESEARCH USE

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

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Try **Gle1 (G-9): sc-514796**, our highly recommended monoclonal alternative to Gle1 (H-300).