

# CGI-99 (N-14): sc-104834

## BACKGROUND

CGI-99, also known as CLE, CLE7, C14orf166 or RLLM1, is a 244 amino acid protein that localizes to the nucleus, as well as to the cytoplasm, and belongs to the UPF0568 family. Expressed in a variety of tissues with particularly high levels in heart and skeletal muscle, CGI-99 functions as a homodimer that interacts with Ninein and is thought to regulate Ninein function. CGI-99 is overexpressed in brain tumor tissue, suggesting a role in tumor development and metastasis. The gene encoding CGI-99 maps to human chromosome 14, which houses over 700 genes and comprises nearly 3.5% of the human genome. Chromosome 14 encodes the Presenilin 1 (PSEN1) gene, which is one of the three key genes associated with the development of Alzheimer's disease (AD). The SERPINA1 gene is also located on chromosome 14 and, when defective, leads to the genetic disorder  $\alpha$ 1-antitrypsin deficiency, which is characterized by severe lung complications and liver dysfunction.

## REFERENCES

- Huarte, M., et al. 2001. PA subunit from influenza virus polymerase complex interacts with a cellular protein with homology to a family of transcriptional activators. *J. Virol.* 75: 8597-8604.
- Howng, S.L., et al. 2004. A novel Ninein-interaction protein, CGI-99, blocks Ninein phosphorylation by GSK-3 $\beta$  and is highly expressed in brain tumors. *FEBS Lett.* 566: 162-168.
- Pérez-González, A., et al. 2006. hCLE/CGI-99, a human protein that interacts with the influenza virus polymerase, is a mRNA transcription modulator. *J. Mol. Biol.* 362: 887-900.
- Zeviani, M. and Carelli, V. 2007. Mitochondrial disorders. *Curr. Opin. Neurol.* 20: 564-571.

## CHROMOSOMAL LOCATION

Genetic locus: C14orf166 (human) mapping to 14q22.1; 2700060E02Rik (mouse) mapping to 14 A3.

## SOURCE

CGI-99 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of CGI-99 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-104834 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

CGI-99 (N-14) is recommended for detection of CGI-99 of human origin, 2700060E02Rik of mouse origin and RGD1304704 of rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

CGI-99 (N-14) is also recommended for detection of CGI-99 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for CGI-99 siRNA (h): sc-92134, 2700060E02Rik siRNA (m): sc-108820, CGI-99 shRNA Plasmid (h): sc-92134-SH, 2700060E02Rik shRNA Plasmid (m): sc-108820-SH, CGI-99 shRNA (h) Lentiviral Particles: sc-92134-V and 2700060E02Rik shRNA (m) Lentiviral Particles: sc-108820-V.

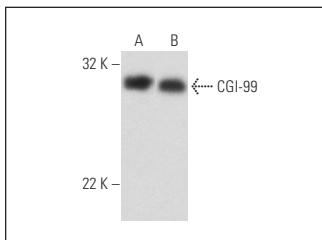
Molecular Weight of CGI-99: 28 kDa.

Positive Controls: Ramos nuclear extract: sc-2153 or L6 whole cell lysate: sc-364196.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



CGI-99 (N-14): sc-104834. Western blot analysis of CGI-99 expression in Ramos nuclear extract (A) and L6 whole cell lysate (B).

## SELECT PRODUCT CITATIONS

- Brobeil, A., et al. 2012. Interaction of PTP1B1 with Tubulin, CGI-99 and Nuf2 during cell cycle progression. *Biomolecules* 2: 122-142.

## RESEARCH USE

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