

GLOD4 (G-13): sc-138311

BACKGROUND

GLOD4 (glyoxalase domain-containing protein 4), also known as C17orf25, is a 313 amino acid protein belonging to the glyoxalase I family. GLOD4 interacts with NUDT9, a highly specific adenosine diphosphate ribose pyrophosphatase. Localized to mitochondrion, GLOD4 is expressed in heart, brain, liver, kidney, pancreas and placenta, but is not found in skeletal muscle or lung. Expression of GLOD4 is decreased in hepatocellular carcinoma samples in comparison to adjacent non-cancerous liver tissues from the same patients. Transfection of GLOD4 in hepatocellular carcinoma cells and overexpression has also been shown to inhibit cell growth. GLOD4 exists as three alternatively spliced isoforms and is encoded by a gene that maps to human chromosome 17p13.3.

REFERENCES

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2. Guo, J.Y., et al. 2002. The promoter analysis of the human C17orf25 gene, a novel chromosome 17p13.3 gene. *Cell Res.* 12: 339-352.
3. Creighton, D.J., et al. 2003. Glyoxalase I inhibitors in cancer chemotherapy. *Biochem. Soc. Trans.* 31: 1378-1382.
4. Zhao, X., et al. 2003. The minimum LOH region defined on chromosome 17p13.3 in human hepatocellular carcinoma with gene content analysis. *Cancer Lett.* 190: 221-232.
5. Perraud, A.L., et al. 2003. NUDT9, a member of the Nudix hydrolase family, is an evolutionarily conserved mitochondrial ADP-ribose pyrophosphatase. *J. Biol. Chem.* 278: 1794-1801.
6. Shen, B.W., et al. 2003. The crystal structure and mutational analysis of human NUDT9. *J. Mol. Biol.* 332: 385-398.
7. Zhang, H.T., et al. 2003. Interaction of C17orf25 with ADP-ribose pyrophosphatase NUDT9 detected via yeast two-hybrid method. *Sheng Wu Hua Xue Yu Sheng Wu Wu Li Xue Bao* 35: 747-751.

CHROMOSOMAL LOCATION

Genetic locus: GLOD4 (human) mapping to 17p13.3; Glod4 (mouse) mapping to 11 B5.

SOURCE

GLOD4 (G-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GLOD4 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.

Blocking peptide available for competition studies, sc-138311 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

GLOD4 (G-13) is recommended for detection of GLOD4 of mouse 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); non cross-reactive with GLOD5.

GLOD4 (G-13) is also recommended for detection of GLOD4 in additional species, including equine.

Suitable for use as control antibody for GLOD4 siRNA (h): sc-93886, GLOD4 siRNA (m): sc-145426, GLOD4 shRNA Plasmid (h): sc-93886-SH, GLOD4 shRNA Plasmid (m): sc-145426-SH, GLOD4 shRNA (h) Lentiviral Particles: sc-93886-V and GLOD4 shRNA (m) Lentiviral Particles: sc-145426-V.

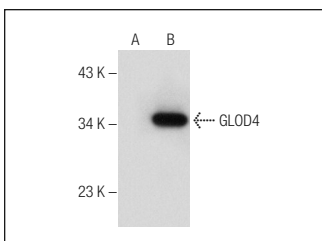
Molecular Weight of GLOD4 isoform 1/2/3: 35/33/21 kDa.

Positive Controls: GLOD4 (h): 293T Lysate: sc-110927.

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



GLOD4 (G-13): sc-138311. Western blot analysis of GLOD4 expression in non-transfected: sc-117752 (A) and human GLOD4 transfected: sc-110927 (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 or our catalog for detailed protocols and support products.