

GLOD5 (D-16): sc-247010

BACKGROUND

Glyoxalase domain-containing proteins are members of the glyoxalase I protein family that function in the removal of methylglyoxal (MGO), an α -oxoaldehyde, from the cell. GLOD5 (glyoxalase domain-containing protein 5) is a 148 amino acid glyoxalase domain-containing protein that is located on chromosome X. GLOD4 (Glyoxalase domain-containing protein 4), also called C17orf25, is a 313 amino acid glyoxalase domain-containing protein that localizes to the mitochondrion. Expressed in liver, heart, brain, kidney, placenta and pancreas, GLOD4 interacts with NUDT9 and, through this interaction, may be involved in suppressing cell growth. GLOD5 expression is decreased in hepatocellular carcinoma cells, suggesting a possible role in tumor suppression. Three isoforms of GLOD5 exist due to alternative splicing events.

REFERENCES

1. Qin, W.X., et al. 2001. Cloning and characterization of a novel gene (C17orf25) from the deletion region on chromosome 17p13.3 in hepatocellular carcinoma. *Cell Res.* 11: 209-216.
2. 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.
3. Antognelli, C., et al. 2006. Overexpression of glyoxalase system enzymes in human kidney tumor. *Cancer J.* 12: 222-228.
4. de Hemptinne, V., et al. 2007. Tumour necrosis factor induces phosphorylation primarily of the nitric-oxide-responsive form of glyoxalase I. *Biochem. J.* 407: 121-128.
5. Kalousova, M., et al. 2008. A419C (E111A) polymorphism of the glyoxalase I gene is associated with vascular complications in chronic hemodialysis patients. *Ann. N.Y. Acad. Sci.* 1126: 268-271.

CHROMOSOMAL LOCATION

Genetic locus: GLOD5 (human) mapping to Xp11.23; Glod5 (mouse) mapping to X A1.1.

SOURCE

GLOD5 (D-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GLOD5 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-247010 P, (100 μ 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.

RESEARCH USE

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

APPLICATIONS

GLOD5 (D-16) is recommended for detection of GLOD5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 GLOD4.

GLOD5 (D-16) is also recommended for detection of GLOD5 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for GLOD5 siRNA (h): sc-91369, GLOD5 siRNA (m): sc-145427, GLOD5 shRNA Plasmid (h): sc-91369-SH, GLOD5 shRNA Plasmid (m): sc-145427-SH, GLOD5 shRNA (h) Lentiviral Particles: sc-91369-V and GLOD5 shRNA (m) Lentiviral Particles: sc-145427-V.

Molecular Weight of GLOD5: 17 kDa.

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) 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.

PROTOCOLS

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