

Glyoxalase I (FL-184): sc-67351

BACKGROUND

The glyoxal pathway plays a role in the detoxification of glucose degradation products (GDP). Glyoxalase I (GLO1), a member of the Glyoxalase family, is effective in eliminating GDP. Overexpression or silencing of Glyoxalase I in mouse brain suggests an association between Glyoxalase I and anxiety. Glyoxalase I has three isoforms generated from two alleles in the genome which forms two homodimers and one heterodimer, each subunit binding one zinc ion. Research demonstrates that GLO1 gene expression is induced in colon carcinoma. Both an Insulin response element (IRE) and a zinc metal response element (MRE) in the promoter region of the GLO1 gene have been identified.

CHROMOSOMAL LOCATION

Genetic locus: GLO1 (human) mapping to 6p21.2; Glo1 (mouse) mapping to 17 A3.3.

SOURCE

Glyoxalase I (FL-184) is a rabbit polyclonal antibody raised against amino acids 1-184 representing full length Glyoxalase I 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.

RESEARCH USE

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

APPLICATIONS

Glyoxalase I (FL-184) is recommended for detection of Glyoxalase I 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Glyoxalase I (FL-184) is also recommended for detection of Glyoxalase I in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Glyoxalase I siRNA (h): sc-60703, Glyoxalase I siRNA (m): sc-60704, Glyoxalase I shRNA Plasmid (h): sc-60703-SH, Glyoxalase I shRNA Plasmid (m): sc-60704-SH, Glyoxalase I shRNA (h) Lentiviral Particles: sc-60703-V and Glyoxalase I shRNA (m) Lentiviral Particles: sc-60704-V.

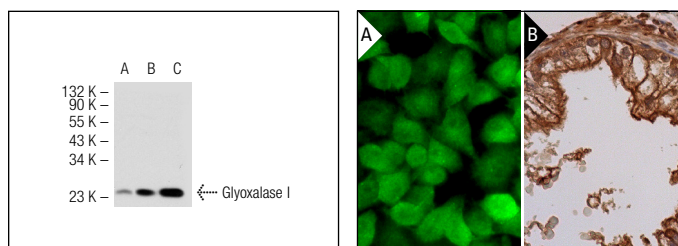
Molecular Weight of Glyoxalase I monomer: 24 kDa.

Positive Controls: Glyoxalase I (h2): 293T Lysate: sc-112198, HEL 92.1.7 cell lysate: sc-2270 or K-562 whole cell lysate: sc-2203.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



Glyoxalase I (FL-184): sc-67351. Western blot analysis of Glyoxalase I expression in non-transfected 293T: sc-117752 (A), human Glyoxalase I transfected 293T: sc-112198 (B) and HEL 92.1.7 (C) whole cell lysates.

Glyoxalase I (FL-184): sc-67351. Immunofluorescence staining of formalin-fixed HeLa cells showing cytoplasmic and nuclear localization. Kindly provided by Yang Xiang, Ph.D., Division of Newborn Medicine, Boston Children's Hospital, Cell Biology Department, Harvard Medical School (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human epididymis tissue showing membrane and nuclear staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Hambusch, B., et al. 2010. Methylglyoxal-mediated anxiolysis involves increased protein modification and elevated expression of glyoxalase 1 in the brain. *J. Neurochem.* 113: 1240-1251.
- Maher, P., et al. 2011. Fisetin lowers methylglyoxal dependent protein glycation and limits the complications of diabetes. *PLoS ONE* 6: e21226.
- Kanoh, N., et al. 2013. Dual structure-activity relationship of osteoclastogenesis inhibitor methyl gerfelin based on TEG scanning. *Bioconjug. Chem.* 24: 44-52.

PROTOCOLS

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



Try **Glyoxalase I (D-5): sc-133214** or **Glyoxalase I (D-6): sc-133144**, our highly recommended monoclonal alternatives to Glyoxalase I (FL-184).