Anti-glyoxalase I (GLO1) antibody, rat monoclonal (6F10)

74-001 100 µg

Shipping and Storage: Shipped at 4℃ or -20℃ and stored at -20℃.

Immunogen: Recombinant GST-fused mouse glyoxalase I (full length)

Form: Purified monoclonal antibody (IgG) 1mg/ml in PBS, 50% glycerol, filter-sterilized

Isotype: Rat IgG2b κ

Applications

1. Western blotting (~X 1,000) 2. Immunocytochemistry 3. ELISA

Other applications are not tested.

Reactivity: Specific to human, simian, and mouse glyoxalase I. Other species are not tested.

Background: Glyoxalase I (GLO1) is an enzyme that plays a role in the detoxification of methylglyoxal (MG), a side-product of glycolysis, via condensation with glutathione to produce S-lactoyl-glutathione. GLO1 is a zinc metalloenzyme whose crystal structure has been solved. The bacterial and yeast enzymes are monomeric while the mammalian one is homodimeric and its sequence is well conserved. GLO1 is found over-expressed in some tumors. GLO1 has also been suggested to be involved in anxiety diseases, autism, and Alzheimer's disease.

The antibody was produced from the hybridoma cultured in serum-free medium and purified under mild conditions by propriety chromatography processes.

Data Link UniProtKB/Swiss-Prot Q9CPU0 (LGUL_MOUSE)

Useful References

1. Chen F *et al* "Role for glyoxalase I in Alzheimer's disease" *Proc Natl Acad Sci USA* **101**: 7687–7692 (2004) PMID: 15128939
2. Junaid MA *et al* "Proteomic studies identified a single nucleotide polymorphism in glyoxalase I as autism susceptibility factor" *Am J Med Genet A* **131**: 11–17 (2004) PMID: 15386471
3. Hovatta I *et al* "Glyoxalase 1 and glutathione reductase 1 regulate anxiety in mice" *Nature* **438**: 662–666 (2005) PMID: 16244648

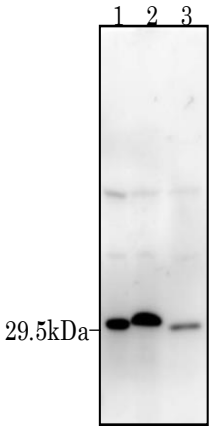

Fig.1 Detection of GLO1 protein by Western blotting with antibody 6F10.

Samples are whole cell extracts. Mouse (COS-1) GLO1 shows a single band of 27 kDa while human (HeLa) and simian (L929) ones show 29 kDa. The first antibody was used at 1/1,000 dilution and as the second antibody, goat anti-rat IgG antibody conjugated with HRP was used at 1/10,000 dilution

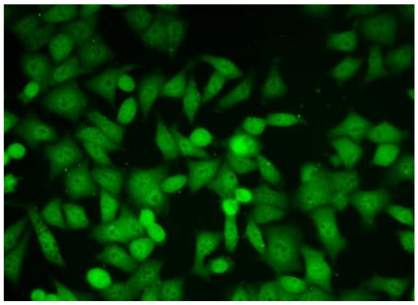

Fig.2 Immunofluoresnt staining of HeLa cells with antibody 6F10.

Cells fixed with 4% paraformaldehyde. Permeabilized with 0.2% Triton X-100. The primary antibody was used at 1/500 dilution. as the second antibody, goat anti-rat IgG antibody conjugated with FITC was used at 1/5,000 dilution