

Product Information

Anti-Glyoxalase I antibody, Rat monoclonal Clone 6F10, purified from hybridoma cell culture

Catalog Number **SAB4200193**

Product Description

Anti-Glyoxalase I (rat IgG2b isotype) is derived from the hybridoma 6F10 produced by the fusion of mouse myeloma cells and splenocytes from rat immunized with a mouse Glyoxalase I (GeneID; 109801) fusion protein.¹ The antibody is purified from culture supernatant of hybridoma cells grown in a bioreactor.

Anti-Glyoxalase I recognizes human, mouse, rat, monkey and canine glyoxalase I. The product may be used in several immunochemical techniques including immunoblotting (~ 21 kDa) and immunocytochemistry.¹

The glyoxalase system, which consists of glyoxalase I (GLO1), glyoxalase II, and a catalytic amount of reduced glutathione (GSH), is an integral component of cellular metabolism. One of the major roles of this system is to detoxify α -ketoaldehydes, especially methylglyoxal (MG), that are endogenously formed as a by-product of the triosephosphate isomerase reaction during glycolysis. A member of this system, GLO1 catalyzes the isomerization of a hemithioacetal, comprised of a nonenzymatic adduct of MG and GSH, to the corresponding α (alpha)-d-hydroxyacid thioester, S-d-lactoylglutathione.² GLO1 appears to be ubiquitously expressed in all mammalian cells, suggesting its biological importance. Studies have suggested that GLO1 may be important for brain function since GLO1 in the brain is involved in Alzheimer's disease, autism, anxiety and the regulation of theta oscillations during sleep.³⁻⁶

Reagent

Supplied as a solution in 0.01M phosphate buffered saline pH 7.4, containing 15 mM sodium azide.

Antibody concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at -20 °C. For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze at -20 °C in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 0.12-0.25 μ g/mL is recommended using A549, HeLa, SH-SY5Y, COS7 or MDCK cell extracts.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

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4. Junaid, M.A., et al., *Am. J. Med. Genet.*, **131**, 11-17 (2004).
5. Hovatta, I., et al., *Nature*, **438**, 662-666 (2005).
6. Tafti, M., et al., *Nat. Genet.*, **34**, 320-325 (2003).

RC, MG, KAA, BR, PHC 04/21-1