

Glyoxalase II (Glx II), Human Recombinant

CATALOG NO:	P1072-10	10 µg
	P1072-50	50 µg
ALTERNATE NAMES:	Hydroxyacylglutathione hydrolase, mitochondrial, HAGH1, GLO2	
SOURCE:	<i>E. coli</i>	
SEQUENCE	Glx II amino acid 14-308 (295 amino acids) with a C-terminal 6xHis-tag	
PURITY:	≥90% by SDS-PAGE	
MOL. WEIGHT:	~32.4 kDa	
FORM:	Liquid	
FORMULATION:	Enzyme supplied in 30% glycerol, 50 mM Tris pH 7.4 and 150 mM NaCl	
STORAGE CONDITIONS:	Store at -20 °C for at least two years. Avoid repeated freeze thaw cycles.	
DESCRIPTION:	The glyoxalase system consists of Glyoxalase I (Glx I) and Glyoxalase II (Glx II) which is responsible for detoxifying α-ketoaldehydes such as the potent and cytotoxic methylglyoxal (MG). Glx I converts MG to S-D-lactoyl-glutathione (SLG). SLG is then hydrolyzed to D-lactate and reduced glutathione by Glx II. Glx II desensitizes cells to p53-dependent DNA damage-induced apoptosis. It also plays a role during development and in the pathogenesis of cancer and neurodegenerative diseases. Glyoxalase II may also be important in the regulation of spermatogenesis.	
SPECIFIC ACTIVITY:	This enzyme has a specific activity ≥ 10 U/mg based on measuring the hydrolysis of SLG at wavelength 240 nm from the following reaction: SLG → lactate + glutathione	
UNIT DEFINITION:	One unit is the amount of enzyme that will hydrolyze 1.0 µmole of SLG per minute at pH 7.4 at 25°C.	

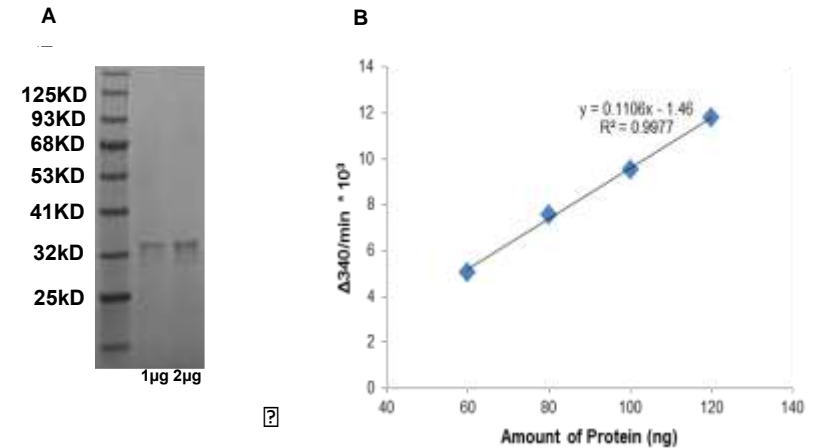


Fig. A. SDS-PAGE (4-20%) of Recombinant Glx II: Recombinant Protein loaded under reducing conditions and stained with Coomassie Blue. The protein shows a predicted MW of ~ 32.4 kDa

Fig. B. Glx II activity assay: The specific activity of Glx II is ≥ 10 U/mg. Different amount of enzyme reacted with 600 µM of SLG yield the different rates. The specific activity is calculated by the decrease in absorbance at 240 nm after 15 min incubation at 25 °C

RELATED PRODUCT:

- HAGH, human recombinant (**Cat. No. 7832-50**)
- Human Recombinant Glyoxalase I (**Cat. No. 6389-100**)
- Human recombinant GSTA1 (**Cat. No. 6346-100**)
- Human recombinant GSTP1 (**Cat. No. 6347-100**)
- Mouse recombinant GSTMu1 (**Cat. No. 6348-100**)
- Mouse recombinant GSTM1 (**Cat. No. 6349-100**)

FOR RESEARCH USE ONLY! Not to be used on humans.