

# Recombinant human Glyoxalase II protein

Catalog Number: ATGP0808

## PRODUCT INFORMATION

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### Expression system

E.coli

### Domain

1-260aa

### UniProt No.

Q16775

### NCBI Accession No.

NP\_001035517

### Alternative Names

Hydroxyacylglutathione hydrolase, GLO, GLX2, Glyoxalase II, HAGH1

## PRODUCT SPECIFICATION

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### Molecular Weight

31.4 kDa (284aa) confirmed by MALDI-TOF

### Concentration

0.5mg/ml (determined by Bradford assay)

### Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.5) containing 10% glycerol

### Purity

> 95% by SDS-PAGE

### Biological Activity

Specific activity is > 500unit/mg, and is defined as the amount of enzyme that reduce 1.0 umole of 5,5 - Dithiobis(2-nitrobenzoic acid) (DTNB) with reduced glutathione per minute at pH 7.5 at 37C.

### Tag

His-Tag

### Application

Enzyme Activity, SDS-PAGE

### Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

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### Description

HAGH is a member of the glyoxalase family and a thiolesterase which hydrolyses S-lactoyl-glutathione to reduced glutathione and D-lactate. This protein is a detoxifying enzyme of glycolysis byproduct methylglyoxal and a target of p63 and p73 and serves as a pro-survival factor of the p53 family. It exists only as a monomer

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and binds two zinc ions per subunit. Recombinant human HAGH protein, fused to His-tag at N-terminus, was expressed in *E. coli* and purified by using conventional chromatography.

## Amino acid Sequence

MGSSHHHHHHH SGLVPRGSH MGSHMKVEVL PALTDNYMYL VIDDETKEAA IVDPVQPQKV VDAARKHGK LTTVLTHHHH  
WDHAGGNEKL VKLESGLKVY GGDDRIGALT HKITHLSTLQ VGSLNVKCLA TPCHTSGHIC YFVSKPGGSE PPAVFTGDTL  
FVAGCGKFYE GTADEMCKAL LEVLGRLPPD TRVYCGHEYT INNLKFARHV EPGNAAIREK LAWAKEKYSI GEPTVPSTLA  
EFTYNPFMR VREKTVQQA GETDPVTTMR AVRREKDQFK MPRD

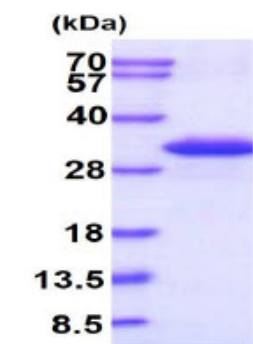
## General References

Vila AJ., et al. (2010) *J Inorg Biochem.* 104(7):726-31.

Crowder MW., et al (2009) *Biochemistry.* 48(23):5426-34.

## DATA

### SDS-PAGE



15% SDS-PAGE (3ug)

3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.