Recombinant human Glyoxalase I protein

Catalog Number: ATGP3144

PRODUCT INFORMATION

Expression system
E.coli

Domain
1-184aa

UniProt No.
Q04760

NCBI Accession No.
NP_006699

Alternative Names
Lactoylglutathione lyase, Glyoxalase I, Glx 1, GLO-1 Methylglyoxalase, Aldoketomutase

PRODUCT SPECIFICATION

Molecular Weight
20.7 kDa (184aa) confirmed by MALDI-TOF

Concentration
1mg/ml (determined by Bradford assay)

Formulation
Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 1mM DTT, 10% glycerol

Purity
> 90% by SDS-PAGE

Endotoxin level
< 1 EU per 1ug of protein (determined by LAL method)

Biological Activity
Specific activity: > 400unit/mg. One unit will form 1.0umol of S-lactoylgutathione from methylglyoxal and reduced glutathione per minute at pH6.5 at 25C.

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

Lactoylglutathione lyase, also known as GLO1, belongs to the glyoxalaselfamily. Glyoxalase I is responsible for the catalysis and formation of S-lactoyl-glutathione from methylglyoxal condensation and reduced glutathione. This enzyme is ubiquitously expressed and is also present in many tumor cell lines, in which its concentration is often upregulated. Recombinant human GLO1 protein was expressed in E. coli and purified by using conventional chromatography techniques.

Amino acid Sequence

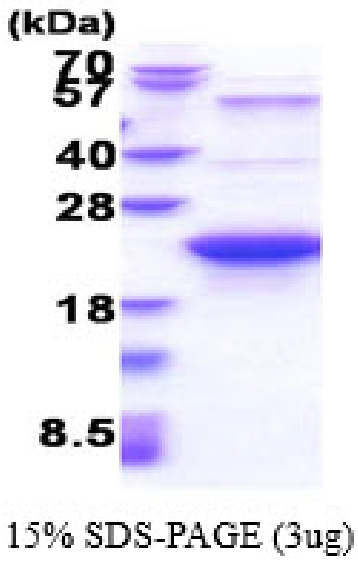
ARPCIPKSFG YSSVVCVCNA TYCDSFDPPT FPALGTFSRY ESTRSGRRME LSMGPIQANH TGTGLLLTLQ PEQKFQKVKG FGGAMTDAAA LNILALSPPA QNLLLKSYFS EEGIGYNIIR VPMASCDFSI RTYTYADTPD DFQLHNFSLP EEDTKLKIPL IHRALQLAQR PVSLLASPWT SPTWLKTNGA VNGKGSLKGQ PGDIYHQTWA RYFVKFLDAY AEHKLQFWAV TAENEPSAGL LSGYPFQCLG FTPEHQRDFI ARDLGPTLAN STHHNVRLLM LDDQRLLLPH WAKVVLTDPE AAKYVHGIAV HWYLDFLAPA KATLGETHRL FPNTMLFASE ACVGSKFWEQ SVRLGSWDRG MQYSHSIITN LLYHVVGWTD WNLALNPEGG PNWVRNFVDS PIIVDITKDT FYKQPMFYHL GHFSKFIPEG SQRVGLVASQ KNDLDAVALM HPDGSAVVVV LNRSSKDVPL TIKDPAVGFL ETISPGYSIH TYLWRRQHHH HHH

General References

Ridderstrom M., et al. (1996) Biochem J 314(Pt2) 463-7
Sakamoto H., et al. (2000) Blood 95(10): 3214-8

DATA

SDS-PAGE



15% SDS-PAGE (3ug)

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