Recombinant human Glutathione Peroxidase 1/GPX1 (U49C) protein

Catalog Number: ATGP1273

PRODUCT INFORMATION

Expression system
E.coli

Domain
1-203aa

UniProt No.
P07203

NCBI Accession No.
NP_000572.2

Alternative Names
Glutathione peroxidase 1, GSHPX1, Selenoprotein GPX1, GPx-1

PRODUCT SPECIFICATION

Molecular Weight
24.2 kDa (223aa) confirmed by MALDI-TOF

Concentration
0.5mg/ml (determined by Bradford assay)

Formulation
Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 2mM DTT, 30% glycerol, 100mM NaCl

Purity
> 90% by SDS-PAGE

Tag
His-Tag

Application
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

Description
GPX1 (Glutathione peroxidase 1) belongs to the glutathione peroxidase family, consisting of eight known glutathione peroxidases (Gpx1-8) in humans. Glutathione peroxidase functions in the detoxification of hydrogen peroxide, and is one of the most important antioxidant enzymes in humans. The GPX1 is part of the enzymatic antioxidant defence, preventing oxidative damage to DNA, proteins and lipids by detoxifying hydrogen and lipid peroxides that may contribute to prostate cancer development. This protein is one of only a few proteins known in higher vertebrates to contain selenocysteine, which occurs at the active site of glutathione peroxidase and is

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coded by the nonsense (stop) codon TGA. Recombinant human GPX1 (u49C) protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.

Amino acid Sequence

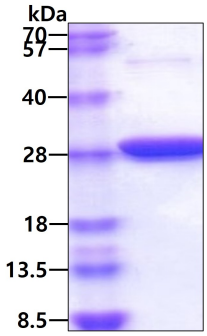
<MGSSHHHHHH SSGLVPRGSH> MCAARLAAAA AAAQSVYAFS ARPLAGGEPV SLGSLRGKVL LIENVASLCG TTVRDYTQMN ELQRRLGPRG LVVLGFPCNQ FGHQENAKNE EILNSLKYVR PGGGFEPNFM LFEKCEVNGA GAHPLFAFLR EALPAPSDDA TALMTDPKLI TWSPVCRNDV AWNFEKFLVG PDGVPLRRYS RRFQTIDIEP DIEALLSQGP SCA

General References

Ichimura Y., et al. (2004) J urol.172 (2):728-32.
Li S, Yan T, et al. (2000) Cancer Res.Jul 60(14):3927-39.

DATA

SDS-PAGE



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