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GPX1 Human

Catalog #:ENPS-193

For research use only.

Description:GPX1 Human Recombinant produced in E.coli is a single, non-glycosylated polypeptide chain containing 223 amino acids (1-203) and having a molecular mass of 24.2kDa.GPX1 is fused to a 20 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

Synonyms: Glutathione peroxidase 1, GPx-1, GSHPx-1, Cellular glutathione peroxidase, GPX1, GPXD, GSHPX1.

Source: Escherichia Coli.

Physical Appearance: Sterile filtered colorless solution.

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.

Purity: Greater than 90% as determined by SDS-PAGE.

Formulation:
The GPX1 solution (0.5mg/ml) contains 20mM Tris-HCl buffer (pH 8.0), 2mM DTT, 30% glycerol and 100mM NaCl.

Stability:
Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).Avoid multiple freeze-thaw cycles.

Usage:
NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drµgs, agricultural or pesticidal products, food additives or household chemicals.

Introduction:
Glutathione peroxidase 1 (GPX1) is a member of the glutathione peroxidase family, consisting of 8 identified glutathione peroxidases (Gpx1-8) in humans. Glutathione peroxidase serves in the detoxification of hydrogen peroxide, and is one of the most vital antioxidant enzymes in humans. The GPX1 is a component of the enzymatic antioxidant defense, preventing oxidative damage to DNA, proteins and lipids by detoxifying hydrogen and lipid peroxides which may contribute to prostate cancer development. GPX1 is one of only a small number of proteins known in higher vertebrates to contain selenocysteine, which occurs at the active site of glutathione peroxidase and is coded by the nonsense (stop) codon TGA. Furthermore, the GPX1 protein is characterized in a polyalanine sequence polymorphism in the N-terminal region, which includes 3 alleles with 5, 6 or 7 alanine (ALA) repeats in this sequence. The allele with 5 ALA repeats is significantly linked to breast cancer risk.

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