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Product datasheet for TP762179

Glutathione Peroxidase 4 (GPX4) (NM_002085) Human Recombinant Protein

Product data:

Product Type:	Recombinant Proteins
Description:	Purified recombinant protein of Human glutathione peroxidase 4 (phospholipid hydroperoxidase) (GPX4), transcript variant 1, Gly73-End, with N-terminal His tag, expressed in E.coli, 50ug
Species:	Human
Expression Host:	E. coli
Expression cDNA Clone or AA Sequence:	A DNA sequence encoding the region(Gly73-End) of GPX4
Tag:	N-His
Predicted MW:	14.2 kDa
Concentration:	>0.05 μg/μL as determined by microplate BCA method
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Buffer:	50 mM Tris-HCl, pH 8.0, 8 M urea
Note:	For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.
Storage:	Store at -80°C.
Stability:	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
RefSeq:	NP_002076
Locus ID:	2879
UniProt ID:	P36969
RefSeq Size:	936
Cytogenetics:	19p13.3
RefSeq ORF:	591
Synonyms:	GPx-4; GSHPx-4; MCSP; PHGPx; SMDS; snGPx; snPHGPx

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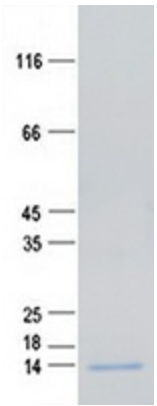
Summary: The protein encoded by this gene belongs to the glutathione peroxidase family, members of which catalyze the reduction of hydrogen peroxide, organic hydroperoxides and lipid hydroperoxides, and thereby protect cells against oxidative damage. Several isozymes of this gene family exist in vertebrates, which vary in cellular location and substrate specificity. This isozyme has a high preference for lipid hydroperoxides and protects cells against membrane lipid peroxidation and cell death. It is also required for normal sperm development; thus, it has been identified as a 'moonlighting' protein because of its ability to serve dual functions as a peroxidase, as well as a structural protein in mature spermatozoa. Mutations in this gene are associated with Sedaghatian type of spondylometaphyseal dysplasia (SMDS). This isozyme is also a selenoprotein, containing the rare amino acid selenocysteine (Sec) at its active site. Sec is encoded by the UGA codon, which normally signals translation termination. The 3' UTRs of selenoprotein mRNAs contain a conserved stem-loop structure, designated the Sec insertion sequence (SECIS) element, that is necessary for the recognition of UGA as a Sec codon, rather than as a stop signal. Transcript variants resulting from alternative splicing or use of alternate promoters have been described to encode isoforms with different subcellular localization. [provided by RefSeq, Dec 2018]

Protein Families: Druggable Genome

Protein Pathways: Arachidonic acid metabolism, Glutathione metabolism

Product images:



Purified recombinant protein GPX4 was analyzed by SDS-PAGE gel and Coomossie Blue Staining.