GPX4, FLAG-Tag Recombinant

Catalog: 100543
Lot: 221018-2

Product Information

Description:	Recombinant human GPX4 (glutathione peroxidase 4), encompassing amino acids 29-198(end). This construct contains an N-terminal FLAG-tag. This recombinant protein was affinity purified.
Background:	GPX4, also known as glutathione peroxidase 4, is one of the eight glutathione peroxidase family of isoenzymes. It is a monomer and uses selenium as co-factor. GXP4 works as a phospholipid hydroperoxidase in protecting cell membranes from lipid peroxidation. It uses reduced glutathione during the reduction of hydrogen peroxide, hydroperoxides and lipid peroxides. The synthesis of GXP4 is metabolically costly to cells, and it seems to be regulated by SLC7A11 (cystine/glutamate transporter)-mediated cystine uptake and activation of mTORC1 (mammalian target of rapamycin complex 1). A mice knock-out model indicated the importance of this protein in embryonic development and life span. In humans, lack of GPX4 activity results in ferroptosis and spondylometaphyseal dysplasia. Its role in ferroptosis and link to mTOR1 make studies into GXP4 also of interest in the field of cancer therapy. Further studies will elucidate its role in more detail and provide us with therapeutical opportunities.
Species:	Human
Construct:	GPX4 (FLAG-29-198(end))
Concentration:	0.23 mg/ml
Expression System:	HEK293
Purity:	≥90%
Format:	Aqueous buffer solution.
Formulated In:	40 mM Tris-HCl, pH 8.0, 110 mM NaCl, 2.2 mM KCl, 20% glycerol, and 100 µg/ml FLAG peptide
MW:	21 kDa
Genbank Accession:	NM_002085.5
Stability:	At least 6 months at -80°C.
Storage:	-80°C
Instructions for Use:	Thaw on ice and gently mix prior to use. DO NOT VORTEX. Perform a quick spin before opening. Aliquot into small volumes and flash freeze for long term storage. Avoid multiple freeze/thaw cycles.
Assay Conditions:	Assay was performed according to Cayman Chemical Item #701880.
Applications:	Useful for the study of enzyme kinetics, screening inhibitors, and selectivity profiling.

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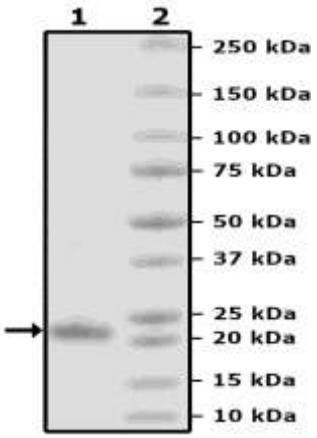
Quality Control Data

4-20% SDS-PAGE Coomassie Staining



GPX4 Activity