



LD Biopharma, Inc.
9924 Mesa Rim Road Suite B
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Tel: 858-876-8266
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human GLRX3 Protein
Catalog Number: hRP-0844
Manufacturer: LD Biopharma, Inc.

Introduction

Human glutaredoxin-3 (GLRX3) gene encodes a member of the glutaredoxin family. Glutaredoxins are oxidoreductase enzymes that reduce a variety of substrates using glutathione as a cofactor. GLRX3 protein binds to and modulates the function of protein kinase C theta. GLRX3 protein may also inhibit apoptosis and play a role in cellular growth, and the expression of this gene may be a marker for cancer.

Full-length human GLRX3 (335 aa) gene was constructed with 17 aa N-terminal T7 tag and expressed in E.coli as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: GLRX3 (GLRX4; GRX3; GRX4; PICOT; TXNL2; TXNL3)
Accession Number: NP_006532
Species: Human
Size: 50 µg / Vial
Composition: 1.0 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, arginine, DTT and Glycerol.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

Lu, Y., et al., *Identification and distribution of thioredoxin-like 2 as the antigen for the monoclonal antibody MC3 specific to colorectal Cancer*. Proteomics 8 (11), 2220-2229 (2008)

Cha, M.K. et al., *Preferential overexpression of glutaredoxin3 in human colon and lung carcinoma*. Cancer Epidemiol 33 (3-4), 281-287 (2009)



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Qu, Y., et al., *Thioredoxin-like 2 regulates human cancer cell growth and metastasis via redox homeostasis and NF-kappaB signaling*. J. Clin. Invest. 121 (1), 212-225 (2011)

Cheng, N.H., et al., *A mammalian monothiol glutaredoxin, Grx3, is critical for cell cycle progression during embryogenesis*. FEBS J. 278 (14), 2525-2539 (2011)

Applications

1. May be used for in vitro Kinase C pathway regulation study with intracellular delivery of this protein.
2. As soluble / native protein, may be used as enzymatic substrate protein for kinase and ubiquitin assay development.
3. May be used for mapping GLRX3 protein-protein interaction.
4. Potential diagnostic biomarker for various cancers.
5. May be used as antigen for specific antibody development.

Quality Control

1. Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGEFGSMAAGAAEA AVAAVEEVGSAGQFEELLRLKAKSLLVVHFWAPWAPQCA
QMNEVMAELAKELPQVSFVKLEAEGVPEVSEKYEISSVPTFLFFKNSQKIDRLDGAHAPELTKK
VQRHASSGSFLPSANEHLKEDLNLRLKKLTHAAPCMLFMKGTPEPRCGFSKQMV EILHKHNIQ
FSSFDFISDEEVRQGLKAYSSWPTY PQLYVSGELIGGLDIIKELEASEELDTICPKAPKLEERL
KVLTNKASVMLFMKGNKQEAKCGFSKQILEILNSTGVEYETFDILEDEEVRQGLKAYSNWPTY P
QLYVKGELVGGLDIVKELKENGELLPILRGEN