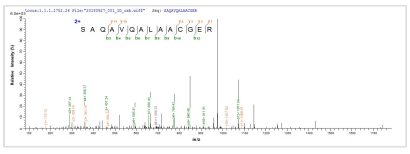
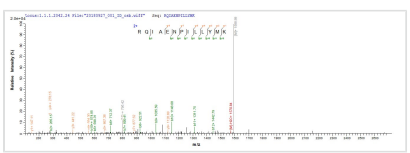
Recombinant Shigella flexneri Glutaredoxin-4 (grxD)

Product Code	CSB-EP364758SZB
Abbreviation	Recombinant Shigella flexneri grxD protein
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P0AC72
Product Type	Recombinant Protein
Immunogen Species	Shigella flexneri
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	MSTTIEKIQRQIAENPILLYMKGSPKLPSCGFSAQAVQALAACGERFAYVDILQN PDIRAELPKYANWPTFPQLWVDGELVGGCDIVIEMYQRGELQQLIKETAAKYK SEEPDAE
Research Area	Cell Biology
Source	E.coli
Target Names	grxD
Protein Names	Recommended name: Glutaredoxin-4 Short name= Grx4Alternative name(s): Monothiol glutaredoxin
Expression Region	1-115aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-SUMO-tagged
Mol. Weight	28.9 kDa
Protein Length	Full Length

Image



Based on the SEQUEST from database of E.coli host and target protein, the LC-MS/MS Analysis result of CSB-EP364758SZB could indicate that this peptide derived from E.coli-expressed Shigella flexneri grxD.



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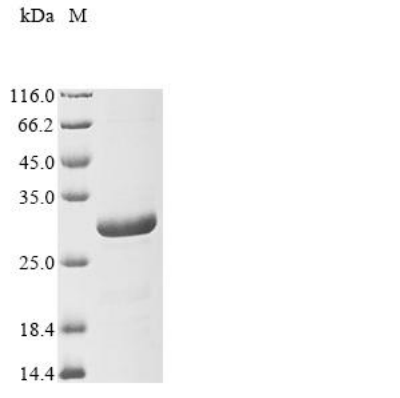

(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

This Recombinant Shigella flexneri grxD protein was made through genetic engineering. By putting the grxD gene into the genetic material of E.coli cell, the E.coli could be used as factories or producers to make the desired grxD protein for research uses. The expression region of this protein is at 1-115aa. N-terminal 6xHis-SUMO tag was used in the expression process. The purity is 85%+ determined by SDS-PAGE.

The cytosolic monothiol glutaredoxin GrxD plays a role in adaptation to iron starvation during infection. GrxD is repressed by the transcription factor SreA in iron replete conditions. During iron starvation, GrxD displays predominant nuclear localization. Downregulation of GrxD expression results in de-repression of genes involved in iron-dependent pathways and repression of genes involved in iron acquisition during iron starvation, but did not significantly affect these genes during iron sufficiency. GrxD displays protein-protein interaction with components of the cytosolic iron-sulfur cluster biosynthetic machinery, indicating a role in this process, and with the transcription factors SreA and HapX, which mediate iron regulation of iron acquisition and iron-dependent pathways. There is a GrxD-independent mechanism for sensing iron sufficiency by HapX. Inactivation of SreA suppresses the lethal effect caused by GrxD inactivation. Taken together, this study demonstrates that GrxD is crucial for iron homeostasis in A. fumigatus.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

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