

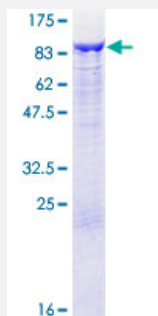
Full-Length

# GCLC (Human) Recombinant Protein (P01)

Catalog # H00002729-P01

Size 25 ug, 10 ug

## Applications



## Specification

### Product Description

Human GCLC full-length ORF ( NP\_001489.1, 1 a.a. - 637 a.a.) recombinant protein with GST-tag at N-terminal.

### Sequence

MGLLSQGSPLSWEETKRHADHVRRHGILQFLHYHAVKDRHKDVLKWGDEVEYMLVSFDHENKK  
VRLVLSGEKVLETLQKEGERTNPNHPTLWRPEYGSYMIEGTPGQPYGGTMSEFNTVEANMRKRR  
KEATSILEENQALCTITSFPRLGCPGFTLPEVKPNPVEGGASKSLFFPDEAINKHPRFSTLTRNIRH  
RRGEKVVINVPFKDKNTPSPFIETFTEDDEASRASKPDHYMDAMGFGMGNCCLQVTFQACSISE  
ARYLYDQLATICPMMALSAASPFYRGYVSDIDCRWGVISASVDDRTREERGLEPLKNNNYRISKSR  
YDSIDSYLSKCGEKYNDIDLTDKEIYEQLLQEGIDHLLAQHVAHLFIRDPLTLFEEKIHLDDANESDH  
FENIQSTNWQTMRFKPPPNDSIGWRVEFRPMEVQLTDFENSAVVFVLLTRVILSYKLDFLIPLS  
KVDENMKVAQKRDAVLQGMFYFRKDICKGGNAVVDGCGKAQNSTELAAEEYTLMSIDTINGKEG  
VFPGLIPLNSYLENMEVDVDTRCSILNYLKLKIKRASGELMTVARWMREFIANHPDYKQDSVITDE  
MNYSLILKCNQIANELCEPELLGSAFRKVKYSGSKTDSSN

### Host

Wheat Germ (in vitro)

### Theoretical MW (kDa)

99.2

### Preparation Method

[in vitro wheat germ expression system](#)

### Purification

Glutathione Sepharose 4 Fast Flow

### Quality Control Testing

12.5% SDS-PAGE Stained with Coomassie Blue.

|                            |                                                                          |
|----------------------------|--------------------------------------------------------------------------|
| <b>Storage Buffer</b>      | 50 mM Tris-HCl, 10 mM reduced Glutathione, pH=8.0 in the elution buffer. |
| <b>Storage Instruction</b> | Store at -80°C. Aliquot to avoid repeated freezing and thawing.          |
| <b>Note</b>                | Best use within three months from the date of receipt of this protein.   |

## Applications

- Enzyme-linked Immunoabsorbent Assay
- Western Blot (Recombinant protein)
- Antibody Production
- Protein Array

## Gene Info — GCLC

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Entrez GeneID</b>       | <a href="#">2729</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>GeneBank Accession#</b> | <a href="#">NM_001498.2</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Protein Accession#</b>  | <a href="#">NP_001489.1</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Gene Name</b>           | GCLC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Gene Alias</b>          | GCS, GLCL, GLCLC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Gene Description</b>    | glutamate-cysteine ligase, catalytic subunit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Omim ID</b>             | <a href="#">230450 606857</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Gene Ontology</b>       | <a href="#">Hyperlink</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Gene Summary</b>        | Glutamate-cysteine ligase, also known as gamma-glutamylcysteine synthetase is the first rate limiting enzyme of glutathione synthesis. The enzyme consists of two subunits, a heavy catalytic subunit and a light regulatory subunit. The gene encoding the catalytic subunit encodes a protein of 367 amino acids with a calculated molecular weight of 72.773 kDa and maps to chromosome 6. The regulatory subunit is derived from a different gene located on chromosome 1p22-p21. Deficiency of gamma-glutamylcysteine synthetase in human is associated with enzymopathic hemolytic anemia. [provided by RefSeq] |
| <b>Other Designations</b>  | gamma-glutamylcysteine synthetase                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

## Pathway

- [Glutathione metabolism](#)
- [Metabolic pathways](#)

## Disease

- [Alzheimer disease](#)
- [Atherosclerosis](#)
- [Autonomic Nervous System Diseases](#)
- [Berylliosis](#)
- [Bipolar Disorder](#)
- [Carcinoma](#)
- [Cardiovascular Diseases](#)
- [Chronic Disease](#)
- [Cognition](#)
- [Constriction](#)
- [Coronary Artery Disease](#)
- [Coronary Disease](#)
- [Cystic fibrosis](#)
- [Diabetes Mellitus](#)
- [Fatty Liver](#)
- [Genetic Predisposition to Disease](#)
- [Hypertension](#)
- [Ischemic Attack](#)
- [Kidney Failure](#)

- [Lung Neoplasms](#)
- [Myocardial Infarction](#)
- [Pulmonary Disease](#)
- [Schizophrenia](#)
- [Stroke](#)