# **PRODUCT INFORMATION**

Expression system E.coli

**Domain** 1-274aa

**UniProt No.** P48507

NCBI Accession No. NP\_002052

Alternative Names Glutamate-cysteine ligase modifier subunit, Glutamate-cysteine ligase, modifier subunit, GLCLR

# **PRODUCT SPECIFICATION**

Molecular Weight 33.3 kDa (298aa) confirmed by MALDI-TOF

**Concentration** 1mg/ml (determined by Bradford assay)

Formulation Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 10% glycerol, 0.15M NaCl

**Purity** > 90% by SDS-PAGE

**Tag** His-Tag

Application SDS-PAGE

### **Storage Condition**

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

#### Description

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. Gamma glutamylcysteine synthetase deficiency has been implicated in some forms of hemolytic anemia. Recombinant human GCLM protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.



#### **Amino acid Sequence**

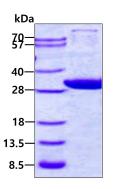
<MGSSHHHHHH SSGLVPRGSH MGSH>MGTDSR AAKALLARAR TLHLQTGNLL NWGRLRKKCP STHSEELHDC IQKTLNEWSS QINPDLVREF PDVLECTVSH AVEKINPDER EEMKVSAKLF IVESNSSSST RSAVDMACSV LGVAQLDSVI IASPPIEDGV NLSLEHLQPY WEELENLVQS KKIVAIGTSD LDKTQLEQLY QWAQVKPNSN QVNLASCCVM PPDLTAFAKQ FDIQLLTHND PKELLSEASF QEALQESIPD IQAHEWVPLW LLRYSVIVKS RGIIKSKGYI LQAKRRGS

### **General References**

Hanzawa, R., et al. (2011) Psychiatry Clin. Neurosci. 65 (1), 39-46

## DATA

#### SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.