

# Recombinant mouse GRP58/PDIA3 protein

Catalog Number: ATGP3620

## PRODUCT INFORMATION

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### Expression system

E.coli

### Domain

25-505aa

### UniProt No.

P27773

### NCBI Accession No.

NP\_031978

### Alternative Names

Protein disulfide isomerase associated 3, 58 kDa glucose-regulated protein, GRP58, 58 kDa microsomal protein, p58, Disulfide isomerase ER-60, Endoplasmic reticulum resident protein 57, ER protein 57, ERp57, Endoplasmic reticulum resident protein 60, ER protein 60, ERp60, Erp, PDI, PDI-Q2, Plca

## PRODUCT SPECIFICATION

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### Molecular Weight

56.8 kDa (505aa) confirmed by MALDI-TOF

### Concentration

1mg/ml (determined by Bradford assay)

### Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 1mM DTT, 0.1M NaCl, and 10% glycerol

### Purity

> 95% by SDS-PAGE

### Endotoxin level

< 1 EU per 1ug of protein (determined by LAL method)

### Biological Activity

Specific activity is >10 A650/cm/min/mg, obtained by measuring the increase of insulin precipitation in absorbance at 650nm resulting from the reduction of insulin.

### Tag

His-Tag

### Application

SDS-PAGE, Enzyme Activity

### 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.

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## BACKGROUND

### Description

PDIA3, also known as protein disulfide-isomerase A3, is a protein of the endoplasmic reticulum that interacts with lectin chaperones calreticulin and calnexin to modulate folding of newly synthesized glycoproteins. This protein has protein disulfide isomerase activity. PDIA3 is also part of the major histocompatibility complex (MHC) class I peptide-loading complex (TAP1), which is essential for formation of the final antigen conformation and export from the endoplasmic reticulum to the cell surface. Recombinant mouse PDIA3 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 MGS>MSDVLEL TDENFESRVS DTGSAGMLLV EFFAPWCGHC KRLAPEYEAA  
ATRLKGIVPL AKVDCTANTN TCNKYGVSGY PTLKIFRDGE EAGAYDGPRT ADGIVSHLKK QAGPASVPLR TEEEFKKFIS  
DKDASVVGFF RDLFSDGHSE FLKAASNLRD NYRFAHTNIE SLVKEYDDNG EGITIFRPLH LANKFEDKTV AYTEKKMTSG  
KIKKFIQDSI FGLCPHMTED NKDLIQGKDL LTAYYDVDYE KNAKGSNYWR NRVMMVAKKF LDAGHKLNFA VASRKTFSHE  
LSDFGLESTT GEVPPVAIRT AKGEKFVMQE EFSRDGKALE QFLQEYFDGN LKRYLKSEPI PESNEGPVKV VVAENFDDIV  
NEEDKDVLIIE FYAPWCGHCK NLEPKYKELG EKLSKDPNIV IAKMDATAND VPSPYEKVGK PTIYFSPANK KLTPKKYEGG  
RELNDFISYL QREATNPPII QEEKPKKKKK AQEDL

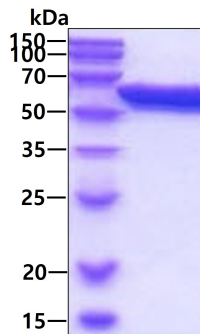
### General References

GilquinVigneron N., et al. (2009) *Eur J Immunol.* 39(9):2371-6.

Forster ML., et al. (2009) *J Biol Chem.* 284(19):13045-56

## DATA

### SDS-PAGE



3 $\mu$ g by SDS-PAGE under reducing condition and visualized by coomassie blue stain.