Recombinant human GRP58/PDIA3 protein

Catalog Number: ATGP3137

PRODUCT INFORMATION

Expression system
E.coli

Domain
25-505aa

UniProt No.
P30101

NCBI Accession No.
NP_005304

Alternative Names
Protein disulfide isomerase family A member 3, Glucose regulated protein 58kDa, GPR58, Protein disulfide isomerase-associated 3, 58 kDa microsomal protein, P58, ERp61, Endoplasmic reticulum resident protein 57, ER protein 57, ERp57, Disulfide isomerase ER-60, Endoplasmic reticulum resident protein 60, ER protein 60, ERp60, GRP57, PI-PLC, HsT17083

PRODUCT SPECIFICATION

Molecular Weight
58.5 kDa (518aa) confirmed by MALDI-TOF

Concentration
1mg/ml (determined by Bradford assay)

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

Purity
> 95% by SDS-PAGE

Biological Activity
Specific activity > 10 A650/cm/min/mg. Enzymatic activity was confirmed by measuring the aggregation of insulin in the presence of DTT.

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.

BACKGROUND

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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 human PDIA3 protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.

Amino acid Sequence

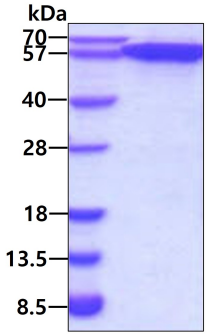
<MRGSHHHHHH GMASMTGGQQ MGRDLYDDDD KDRWGS>MSDV LELTDDNFES RISDTGSAGL MLVEFFAPWC GHCKRLAPEY EAAATRLKGI VPLAKVDCTA NTNTCNKYGV SGYPTLKIFR DGEEAGAYDG PRTADGIVSH LKKQAGPASV PLRTEEEFKK FISDKDASIV GFFDDSFSEA HSEFLKAASN LRDNYRFAHT NVESLVNEYD DNGEGIILFR PSHLTNKFED KTVAYTEQKM TSGKIKKFIQ ENIFGICPHM TEDNKDLIQG KDLLIAYYDV DYEKNAKGSN YWRNRVMMVA KKFLDAGHKL NFAVASRKTF SHELSDFGLE STAGEIPVVA IRTAKGEKFV MQEEFSRDGK ALERFLQDYF DGNLKRYLKS EPIPESNDGP VKVVVAENFD EIVNNENKDV LIEFYAPWCG HCKNLEPKYK ELGEKLSKDP NIVIAKMDAT ANDVPSPYEV RGFPTIYFSP ANKKLNPKKY EGGRELSDFI SYLQREATNP PVIQEEKPKK KKKAQEDL

General References

Vigneron 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



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