

Active Recombinant Human PDIA3 protein, His-tagged

Cat. No. PDIA3-20H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human PDIA3 protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.
Species	Human
Source	E.coli
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.
Form	Liquid. In 20 mM Tris-HCl buffer (pH8.0) containing 1mM DTT, 0.1 M NaCl, and 10% glycerol
Bio-activity	Specific activity >20 A650/cm/min/mg. Enzymatic activity was confirmed by measuring the aggregation of insulin in the presence of DTT.
Molecular Mass	58.5 kDa (518aa), confirmed by MALDI-TOF
AA Sequence	MRGSHHHHHH GMASMTGGQQ MGRDLYDDDD KDRWGSMDSV LELTDDNFES RISDTGSAGL MLVEFFAPWC GHCKRLAPEY EAAATRLKGI VPLAKVDCTA NTNTCNKYGV SGYPTLKIFR DGEEAGAYDG PRTADGIVSH LKKQAGPASV

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PLRTEEEFKK FISDKDASIV GFFDDSFSEAHSEFLKAASN LRDNYRFAHT
 NVESLVNEYD DNGEGILFR PSHLTNKFED KTVAYTEQKM TSGKIKKFIQ
 ENIFGICPHM TEDNKDLIQG KDLLIAYYDV DYEKNAKGSN YWRNRVMMVA
 KKFLDAGHKL NFAVASRKTF SHELSDFGLE STAGEIPVVA IRTAKGEKFV
 MQEEFSRDGKALERFLQDYF DGNLKRYLKS EPIPESNDGP VKVVVAENFD
 EIVNNENKDV LIEFYAPWCG HCKNLEPKYK ELGEKLSKDP NIVIAKMDAT
 ANDVPSPYEV RGFPTIYFSP ANKKLNPKKY EGGRELSDFI SYLQREATNP
 PVIQEEKPKK KKKAQEDL

Purity >95% by SDS - PAGE

Storage Can be stored at +4 centigrade short term (1-2 weeks). For long term storage, aliquot and store at -20 centigrade or -70 centigrade. Avoid repeated freezing and thawing cycles.

Concentration 1 mg/ml (determined by Bradford assay)

GENE INFORMATION

Gene Name PDIA3 protein disulfide isomerase family A, member 3 [Homo sapiens]

Official Symbol PDIA3

Synonyms PDIA3; protein disulfide isomerase family A, member 3; glucose regulated protein, 58kDa , GRP58, protein disulfide isomerase associated 3; protein disulfide-isomerase A3; ERp57; ERp60; ERp61; GRP57; HsT17083; P58; PI PLC; ER protein 57; ER protein 60; phospholipase C-alpha; 58 kDa microsomal protein; disulfide isomerase ER-60; endoplasmic reticulum P58; 58 kDa glucose-regulated protein; glucose regulated protein, 58kDa; protein disulfide isomerase-associated 3; endoplasmic reticulum resident protein 57; endoplasmic reticulum resident protein 60; ER60;

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	GRP58; PI-PLC;
Gene ID	2923
mRNA Refseq	NM_005313
Protein Refseq	NP_005304
MIM	602046
UniProt ID	P30101
Chromosome Location	15q15
Pathway	Adaptive Immune System, organism-specific biosystem; Antigen Presentation: Folding, assembly and peptide loading of class I MHC, organism-specific biosystem; Antigen processing and presentation, organism-specific biosystem; Antigen processing and presentation, conserved biosystem; Antigen processing-Cross presentation, organism-specific biosystem; Asparagine N-linked glycosylation, organism-specific biosystem; Calnexin/calreticulin cycle, organism-specific biosystem;
Function	cysteine-type endopeptidase activity; electron carrier activity; isomerase activity; phospholipase C activity; protein binding; protein disulfide isomerase activity; protein disulfide oxidoreductase activity;