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# GGT1 Protein (AA 1-380) (rho-1D4 tag)



## **Image**



#### Overview

Quantity:	1 mg
Target:	GGT1
Protein Characteristics:	AA 1-380
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This GGT1 protein is labelled with rho-1D4 tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

### **Product Details**

## Sequence:

MKKKLVVLGL LAVVLVIVIV GLCLWLPSAS KEPDNHVYTR AAVAADAKQC SKIGRDALRD GGSAVDAAIA ALLCVGLMNA HSMGIGGGLF LTIYNSTTRK AEVINAREVA PRLAFATMFN SSEQSQKGGL SVAVPGEIRG YELAHQRHGR LPWARLFQPS IQLARQGFPV GKGLAAALEN KRTVIEQQPV LCEVFCRDRK VLREGERLTL PQLADTYETL AIEGAQAFYN GSLTAQIVKD IQAAGGIVTA EDLNNYRAEL IEHPLNISLG DVVLYMPSAP LSGPVLALIL NILKGYNFSR ESVESPEQKG LTYHRIVEAF RFAYAKRTLL GDPKFVDVTE VVRNMTSEFF AAQLRAQISD DTTHPISYYK PEFYTPDDGG

Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.

#### Characteristics:

- Made in Germany from design to production by highly experienced protein experts.
- Human GGT1 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.

• State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a made to order protein and will be made for the first time for your order. Our experts in the lab will ensure that you receive a correctly folded protein.

The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization).

When you order this made-to-order protein you will only pay upon receival of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered. The concentration of our recombinant proteins is measured using the absorbance at 280nm. The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.

The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein.

Purification:

Three step purification of membrane proteins expressed in baculovirus infected SF9 insect cells:

- 1. Membrane proteins are fractioned by ultracentrifugation and subsequently solubilized with different detergents (detergent screen). Samples are analyzed by Western blot.
- 2. The best performing detergent is used for solubilization and the proteins are purified via their rho1D4 tag via two rho1D4 antibody columns: one DTT resistant, the other one not. Eluate fractions are analyzed by Western blot.
- Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatograph. Eluate fractions are analyzed by SDS-PAGE and Western blot.

 Purity:
 >95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

 Sterility:
 0.22 μm filtered

 Endotoxin Level:
 Protein is endotoxin-free.

 Grade:
 Crystallography grade

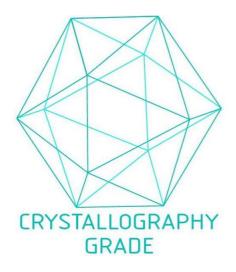
# **Target Details**

Target:	GGT1
Alternative Name:	GGT1 (GGT1 Products)
Background:	Cleaves the gamma-glutamyl bond of extracellular glutathione (gamma-Glu-Cys-Gly),
	glutathione conjugates, and other gamma-glutamyl compounds. The metabolism of
	glutathione releases free glutamate and the dipeptide, cysteinyl-glycine, which is hydrolyzed to
	cysteine and glycine by dipeptidases. In the presence of high concentrations of dipeptides and
	some amino acids, can also catalyze a transpeptidation reaction, transferring the gamma-
	glutamyl moiety to an acceptor amino acid to form a new gamma-glutamyl compound. Initiate
	extracellular glutathione (GSH) breakdown, provides cells with a local cysteine supply and
	contributes to maintain intracellular GSH level. It is part of the cell antioxidant defense
	mechanism. Isoform 3 seems to be inactive. {ECO:0000269 PubMed:20622017,
	ECO:0000269 PubMed:24047895, ECO:0000269 PubMed:7673200,
	ECO:0000269 PubMed:7759490, ECO:0000269 PubMed:8095045,
	ECO:0000269 PubMed:8827453}.
Molecular Weight:	42.6 kDa Including tag.
UniProt:	P19440
UniProt: Application Details	P19440
	P19440  In addition to the applications listed above we expect the protein to work for functional studies
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## Handling

Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

## **Images**



**Image 1.** "Crystallography Grade" protein due to multi-step, protein-specific purification process