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VDAC1 Protein (AA 2-283) (rho-1D4 tag)



Overview

Quantity:	1 mg
Target:	VDAC1
Protein Characteristics:	AA 2-283
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This VDAC1 protein is labelled with rho-1D4 tag.
Application:	Western Blotting (WB), ELISA, SDS-PAGE (SDS), Crystallization (Crys)

Product Details	
Sequence:	AVPPTYADLG KSARDVFTKG YGFGLIKLDL KTKSENGLEF TSSGSANTET TKVTGSLETK
	YRWTEYGLTF TEKWNTDNTL GTEITVEDQL ARGLKLTFDS SFSPNTGKKN AKIKTGYKRE
	HINLGCDMDF DIAGPSIRGA LVLGYEGWLA GYQMNFETAK SRVTQSNFAV GYKTDEFQLH
	TNVNDGTEFG GSIYQKVNKK LETAVNLAWT AGNSNTRFGI AAKYQIDPDA CFSAKVNNSS
	LIGLGYTQTL KPGIKLTLSA LLDGKNVNAG GHKLGLGLEF QA
	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 VDAC1 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: VDAC1

Alternative Name:

VDAC1 (VDAC1 Products)

Target Details

Background:	Forms a channel through the mitochondrial outer membrane and also the plasma membrane.
	The channel at the outer mitochondrial membrane allows diffusion of small hydrophilic
	molecules, in the plasma membrane it is involved in cell volume regulation and apoptosis. It
	adopts an open conformation at low or zero membrane potential and a closed conformation at
	potentials above 30-40 mV. The open state has a weak anion selectivity whereas the closed
	state is cation-selective (PubMed:11845315, PubMed:18755977, PubMed:20230784,
	PubMed:8420959). May participate in the formation of the permeability transition pore complex
	(PTPC) responsible for the release of mitochondrial products that triggers apoptosis
	(PubMed:15033708, PubMed:25296756). {ECO:0000269 PubMed:11845315,
	ECO:0000269 PubMed:15033708, ECO:0000269 PubMed:18755977,
	ECO:0000269 PubMed:20230784, ECO:0000269 PubMed:25296756,
	ECO:0000269 PubMed:8420959}.
Molecular Weight:	31.8 kDa Including tag.
UniProt:	P21796
Application Details	
Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies
	as well. As the protein has not been tested for functional studies yet we cannot offer a gurantee
	though.
Comment:	In cases in which it is highly likely that the recombinant protein with the default tag will be
	insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to
	increase solubility. We will discuss all possible options with you in detail to assure that you
	receive your protein of interest.
Restrictions:	For Research Use only
Handling	
Format:	Liquid
Buffer:	100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)