antibodies

Datasheet for ABIN3096135 TRPV4 Protein (AA 712-871) (His tag)





Overview

overview		
Quantity:	1 mg	
Target:	TRPV4	
Protein Characteristics:	AA 712-871	
Origin:	Human	
Source:	Escherichia coli (E. coli)	
Protein Type:	Recombinant	
Purification tag / Conjugate:	This TRPV4 protein is labelled with His tag.	
Application:	Crystallization (Crys), ELISA, SDS-PAGE (SDS), Western Blotting (WB)	
Product Details		
Sequence:	NMLIALMGET VGQVSKESKH IWKLQWATTI LDIERSFPVF LRKAFRSGEM VTVGKSSDGT	
	PDRRWCFRVD EVNWSHWNQN LGIINEDPGK NETYQYYGFS HTVGRLRRDR WSSVVPRVVE	
	LNKNSNPDEV VVPLDSMGNP RCDGHQQGYP RKWRTDDAPL	
	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 TRPV4 Protein (raised in E. Coli) 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	
	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.	

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	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:	Two step purification of proteins expressed in bacterial culture:	
	1. In a first purification step, the protein is purified from the cleared cell lysate using three	
	different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. Eluate	
	fractions are analyzed by SDS-PAGE. 2. Protein containing fractions of the best purification are subjected to second purification step	
	through size exclusion chromatography. 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:	Endotoxin has not been removed. Please contact us if you require endotoxin removal.	
Grade:	Crystallography grade	
Target Details		
Target:	TRPV4	
Alternative Name:	TRPV4 (TRPV4 Products)	
Background:	Non-selective calcium permeant cation channel involved in osmotic sensitivity and	
	mechanosensitivity. Activation by exposure to hypotonicity within the physiological range	
	exhibits an outward rectification (PubMed:18826956, PubMed:18695040). Also activated by	

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	intracellular Ca(2+) potentiates currents. Channel activity seems to be regulated by a	
	calmodulin-dependent mechanism with a negative feedback mechanism (PubMed:12724311,	
	PubMed:18826956). Promotes cell-cell junction formation in skin keratinocytes and plays an	
	important role in the formation and/or maintenance of functional intercellular barriers (By	
	similarity). Acts as a regulator of intracellular Ca(2+) in synoviocytes (PubMed:19759329). Plays	
	an obligatory role as a molecular component in the nonselective cation channel activation	
	induced by 4-alpha-phorbol 12,13-didecanoate and hypotonic stimulation in synoviocytes and	
	also regulates production of IL-8 (PubMed:19759329). Together with PKD2, forms mechano-	
	and thermosensitive channels in cilium (PubMed:18695040). Negatively regulates expression of	
	PPARGC1A, UCP1, oxidative metabolism and respiration in adipocytes (By similarity). Regulates	
	expression of chemokines and cytokines related to proinflammatory pathway in adipocytes (By	
	similarity). Together with AQP5, controls regulatory volume decrease in salivary epithelial cells	
	(By similarity). {ECO:0000250 UniProtKB:Q9EPK8, ECO:0000269 PubMed:11025659,	
	EC0:0000269 PubMed:12724311, EC0:0000269 PubMed:18695040,	
	ECO:0000269 PubMed:18826956, ECO:0000269 PubMed:19759329}.	
Molecular Weight:	19.5 kDa Including tag.	
UniProt:	Q9HBA0	
Pathways:	Hormone Transport, Cell-Cell Junction Organization	
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.	

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Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Images

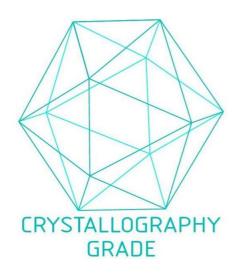


Image 1. "Crystallography Grade" protein due to multi-step, protein-specific purification process