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TRPM8 Protein (AA 851-958) (His tag)



Image



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Quantity:	1 mg	
Target:	TRPM8	
Protein Characteristics:	AA 851-958	
Origin:	Human	
Source:	Escherichia coli (E. coli)	
Protein Type:	Recombinant	
Purification tag / Conjugate:	This TRPM8 protein is labelled with His tag.	
Application:	Western Blotting (WB), SDS-PAGE (SDS), Crystallization (Crys), ELISA	
Product Details		
Sequence:	RNLGPKIIML QRMLIDVFFF LFLFAVWMVA FGVARQGILR QNEQRWRWIF RSVIYEPYLA	
	MFGQVPSDVD GTTYDFAHCT FTGNESKPLC VELDEHNLPR FPEWITIP	
	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 TRPM8 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	
	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:

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:	TRPM8
Alternative Name:	TRPM8 (TRPM8 Products)
Background:	Receptor-activated non-selective cation channel involved in detection of sensations such as coolness, by being activated by cold temperature below 25 degrees Celsius. Activated by icilin, eucalyptol, menthol, cold and modulation of intracellular pH . Involved in menthol sensation.
	Permeable for monovalent cations sodium, potassium, and cesium and divalent cation calcium. Temperature sensing is tightly linked to voltage-dependent gating. Activated upon

depolarization, changes in temperature resulting in graded shifts of its voltage-dependent activation curves. The chemical agonist menthol functions as a gating modifier, shifting activation curves towards physiological membrane potentials. Temperature sensitivity arises from a tenfold difference in the activation energies associated with voltage-dependent opening and closing. In prostate cancer cells, shows strong inward rectification and high calcium selectivity in contrast to its behavior in normal cells which is characterized by outward rectification and poor cationic selectivity. Plays a role in prostate cancer cell migration (PubMed:25559186). Isoform 2 and isoform 3 negatively regulate menthol- and cold-induced channel activity by stabilizing the closed state of the channel. {ECO:0000269|PubMed:15306801, ECO:0000269|PubMed:16174775,

ECO:0000269|PubMed:22128173, ECO:0000269|PubMed:25559186}.

Molecular Weight:

13.8 kDa Including tag.

UniProt:

Q7Z2W7

Application Details

Ann	lication	Notes.
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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)

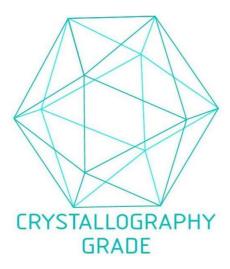


Image 1. "Crystallography Grade" protein due to multi-step, protein-specific purification process