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## Claudin 15 Protein (CLDN15) (AA 1-228) (Strep Tag)



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Quantity:	1 mg
Target:	Claudin 15 (CLDN15)
Protein Characteristics:	AA 1-228
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This Claudin 15 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

#### **Product Details**

### Sequence:

MSMAVETFGF FMATVGLLML GVTLPNSYWR VSTVHGNVIT TNTIFENLWF SCATDSLGVY NCWEFPSMLA LSGYIQACRA LMITAILLGF LGLLLGIAGL RCTNIGGLEL SRKAKLAATA GALHILAGIC GMVAISWYAF NITRDFFDPL YPGTKYELGP ALYLGWSASL ISILGGLCLC SACCCGSDED PAASARRPYQ APVSVMPVAT SDQEGDSSFG KYGRNAYV

Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.

#### Characteristics:

Key Benefits:

- Made in Germany from design to production by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- · These proteins are normally active (enzymatically functional) as our customers have

reported (not tested by us and not guaranteed).

• 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.

#### **Expression System:**

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require posttranslational modifications.
- During lysate production, the cell wall and other cellular components that are not required for
  protein production are removed, leaving only the protein production machinery and the
  mitochondria to drive the reaction. During our lysate completion steps, the additional
  components needed for protein production (amino acids, cofactors, etc.) are added to
  produce something that functions like a cell, but without the constraints of a living system all that's needed is the DNA that codes for the desired protein!

#### Concentration:

- 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.
- · We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

#### Purification:

Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®):

- 1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE.
- 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:

>80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

Endotoxin Level:

Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)

## **Target Details**

Target:	Claudin 15 (CLDN15)	
Alternative Name:	CLDN15 (CLDN15 Products)	
Background:	Claudin-15,FUNCTION: Claudins function as major constituents of the tight junction complexe.	
	that regulate the permeability of epithelia. While some claudin family members function as	
	impermeable barriers, others mediate the permeability to ions and small molecules. Often,	
	several claudin family members are coexpressed and interact with each other, and this	
	determines the overall permeability. CLDN15 forms tight junctions that mediate the paracellula	
	transport of small monovalent cations along a concentration gradient, due to selective	
	permeability for Na(+), Li(+) and K(+) ions, but selects against Cl(-) ions. Plays an important rol	
	in paracellular Na(+) transport in the intestine and in Na(+) homeostasis. Required for normal	
	Na(+)-dependent intestinal nutrient uptake. {ECO:0000269 PubMed:12055082,	
	ECO:0000269 PubMed:13129853}.	
Molecular Weight:	24.4 kDa	
UniProt:	P56746	
Pathways:	Cell-Cell Junction Organization, Hepatitis C	
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	
	guarantee though.	
Comment:	ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from	
	Nicotiana tabacum c.v This contains all the protein expression machinery needed to produce	
	even the most difficult-to-express proteins, including those that require post-translational	
	modifications.	
	During lysate production, the cell wall and other cellular components that are not required for	
	protein production are removed, leaving only the protein production machinery and the	
	mitochondria to drive the reaction. During our lysate completion steps, the additional	
	components needed for protein production (amino acids, cofactors, etc.) are added to produce	
	something that functions like a cell, but without the constraints of a living system - all that's	
	needed is the DNA that codes for the desired protein!	
Restrictions:	For Research Use only	

## Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)