

Introduction of claudins family

Cell-to-cell tight junctions are heavily influenced by a group of proteins known as Claudins. These tight junctions form a paracellular barrier responsible for controlling the movement of molecules within the intercellular space of epithelial cells. With four transmembrane domains, the N-terminus and C-terminus of Claudins reside within the cytoplasm.

Claudins, ranging from nematodes to humans, are small transmembrane proteins (20–24/27 kDa) found abundantly across various organisms. Despite their differences, they share a similar structure. Claudins traverse the cellular membrane four times, with both the N-terminal and C-terminal ends positioned within the cytoplasm. Notably, the two extracellular loops show high conservation.

Claudins and cancer/tumor

The high degree of cellular organization typically observed in normal differentiated tissues is often lost in cancer. Tumor cells frequently exhibit abnormal tight junction function as well as decreased differentiation and cell polarity. Loss of tight junction integrity may be particularly important in allowing the diffusion of nutrients and other factors necessary for the survival and growth of the tumor cells. In addition, decreased polarity and differentiation may be important for the metastatic phenotype, where individual cells must leave the primary site and enter the blood vessels to reach distant sites. Finally, the destruction of functional tight junctions in cancer may have a role in growth control.

Anti-claudin 18.2 antibody drug

Claudin 18.2 (CLDN18.2), a gastric mucosa tight junction protein, is aberrantly expressed in various cancers. A Zolbetuximab or called IMAB362, is an anti-CLDN18.2 monoclonal antibody, specifically binds to CLDN18.2-positive cancer cells. It has been conducted the first-in-human (FIH) test of its kind. Result shows good clinical effects of IMAB362 in patients with advanced gastroesophageal cancer (GEC) after a single IV infusion.

Selected images of the protein

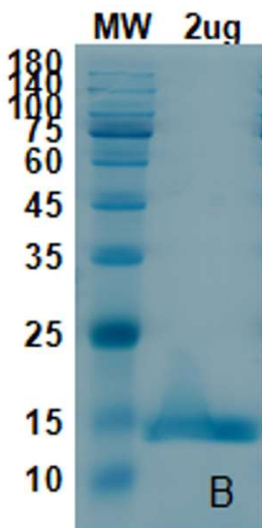


Fig.1 QC of the purified protein human CLDN 1 fragment.

2 μ g: 2 μ g protein was loaded in the indicated lane. Protein purity is higher than 90%.

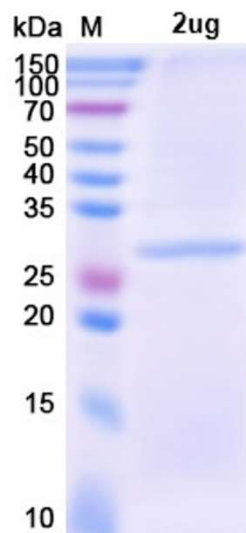


Fig.2 QC of the purified protein human CLDN 18.1 (MOP024).

2 μ g: 2 μ g protein was loaded in the indicated lane. Protein purity is higher than 90%.

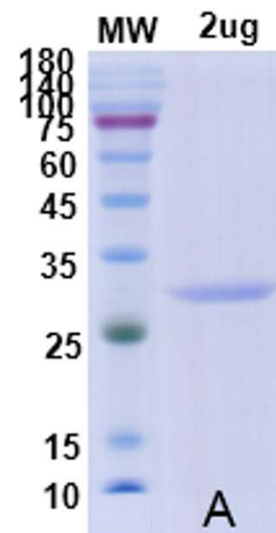


Fig.3 QC of the purified protein human CLDN 23 (MOP031).

2 μ g: 2 μ g protein was loaded in the indicated lane. Protein purity is higher than 90%.

Brief Introduction of Made-to-Order (MTO) service

BioBench offers a Made-to-Order recombinant protein production service that begins production only when the client places an order. We deliver freshly made proteins of high quality. In comparison to our standard recombinant protein expression service, you are not financially obligated if the service fails to produce the protein.

Service Highlights:

1. Client only needs to pay for the protein – we guarantee the yield and the purity.
2. If Bio Bench failed to deliver the protein, you do not need to pay any cost.
3. The protein is freshly produced for your order. Our scientists in the lab will ensure that you receive a correctly folded protein.
4. Protein sequence and tag are both pre-designed, free from customization risk.
5. Low endotoxin and pyrogen free.

Product list

Cat.	Product Name	UniProt	Fragment	Expression Host	Tag	Purity	Package Size
MOP007	hCLDN 1	O95832	AA 1-211	Insect Cell Line	Strep-His tag	>90%	100µg/500µg /1mg/custom size
MOP008	hCLDN 2	P57739	AA 1-230	Insect Cell Line	Strep tag	>90%	
MOP009	hCLDN 3	O15551	AA 1-220	Insect Cell Line	Strep tag	>90%	
MOP010	hCLDN 4	O14493	AA 1-209	Insect Cell Line	Strep tag	>90%	
MOP011	hCLDN 5	O00501	AA 1-218	Insect Cell Line	Strep tag	>90%	
MOP012	hCLDN 6	P56747	AA 1-220	Insect Cell Line	Strep tag	>90%	
MOP013	hCLDN 7	O95471	AA 1-211	Insect Cell Line	Strep tag	>90%	
MOP014	hCLDN 8	P56748	AA 1-225	Insect Cell Line	Strep tag	>90%	
MOP015	hCLDN 9	O95484	AA 1-217	Insect Cell Line	Strep tag	>90%	
MOP016	hCLDN 10	P78369	AA 1-228	Insect Cell Line	Strep tag	>90%	
MOP017	hCLDN 11	O75508	AA 1-207	Insect Cell Line	Strep tag	>90%	
MOP018	hCLDN 12	P56749	AA 1-244	Insect Cell Line	Strep tag	>90%	
MOP020	hCLDN 14	O95500	AA 1-239	Insect Cell Line	Strep tag	>90%	
MOP021	hCLDN 15	P56746	AA 1-228	Insect Cell Line	Strep tag	>90%	
MOP022	hCLDN 16	Q9Y5I7	AA 1-305	Insect Cell Line	Strep tag	>90%	
MOP023	hCLDN 17	P56750	AA 1-224	Insect Cell Line	Strep tag	>90%	
MOP024	hCLDN 18.1	P56856-1	AA 1-261	Insect Cell Line	Strep tag	>90%	
MOP026	hCLDN 18.2	P56856-2	AA 1-200	Insect Cell Line	Strep tag	>90%	
MOP027	hCLDN 19	Q8N6F1	AA 1-224	Insect Cell Line	Strep tag	>90%	
MOP028	hCLDN 20	P56880	AA 1-219	Insect Cell Line	Strep tag	>90%	
MOP030	hCLDN 22	Q8N7P3	AA 1-220	Insect Cell Line	Strep tag	>90%	
MOP031	hCLDN 23	Q96B33	AA 1-292	Insect Cell Line	Strep tag	>90%	
MOP032	hCLDN 24	A6NM45	AA 1-220	Insect Cell Line	Strep tag	>90%	
MOP033	hCLDN 25	C9JDP6	AA 1-229	Insect Cell Line	Strep tag	>90%	