

**CLDN 18.2 - Human Claudin 18.2 protein**

**# PL119**

**Product specification**

**Acronym:** CLDN 18.2

**Synonyms:** Claudin-18

**Origin species :** Human

**Protein reference :** P56856-2 (UniProtKB)

NP\_001002026.1 (GenBank)

**Family :** Tight junction protein in gastric mucosa

**Isoform :** Full-length isoform A2

**Expression system:** E.coli based CFPS

**Format:** Proteoliposomes

**Protein sequence:** Met1 – Val261

**Tag :** 6xHis tag (N-ter)

**Cleavage site:** Factor Xa

**Product MW:** 30 kDa

**Applications :** Screening antibody-based drug candidates binding with CLDN18.2, measuring binding affinity and stability, using as immunogen for anti-CLDN18.2 antibody development.

**Product description**

The claudin18.2 (CLDN18.2) protein, an isoform of claudin18, a member of the tight junction protein family, is a highly selective biomarker with limited expression in normal tissues and often abnormal expression during the occurrence and development of various primary malignant tumors, such as gastric cancer/gastroesophageal junction (GC/GEJ) cancer, breast cancer, colon cancer, liver cancer, head and neck cancer, bronchial cancer and non-small-cell lung cancer. CLDN18.2 participates in the proliferation, differentiation and migration of tumor cells.

**Recombinant protein sequence**

**His tag – factor X cleavage site –**

MAVTACQGLGFVVSLLIGIAGIIAATCMDQWSTQDLYNNPVTAVFNYOGLWRSCVRESSGFTECRGYFTLLGLPAMLQAVRALMIVG  
IVLGAIGLLVSIFALKCIRIGSMEDSAKANMTLTSGIMFIVSGLCAIAGVSVFANMLVTNFWMSTANMYTGMGGMVQTVQTRYTFG  
AALFVGWVAGGLTLIGGVMMCIACRGLAPEETNYKAVSYHASGHSVAYKPGGFKASTGFGSNTKNKKIYDGGARTEDEVQSYPSK  
HDYV



## Quality analysis

### Purity:

Liposomes are directly incorporated into the Cell-Free reaction, thus, some impurities from the *E.coli* lysate might be present in the proteoliposomes.

A negative control (proteoliposomes without the protein of interest) can be provided.

The purity can be improved by protein expression in detergent and relipidification after purification step(s).

**Purification procedure:** CLDN 18.2 proteoliposomes are purified on a sucrose gradient.

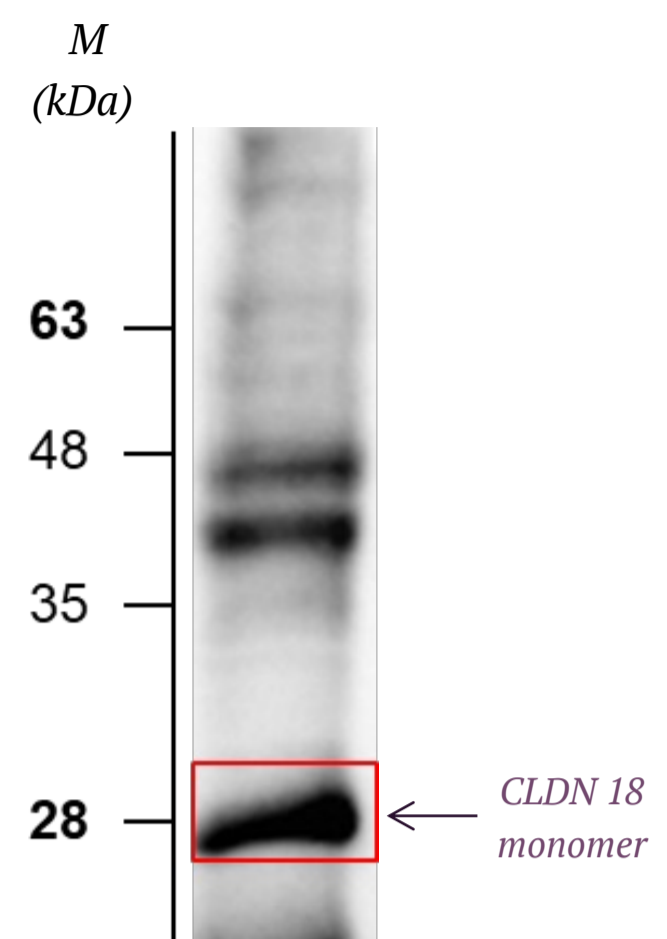
*NB : Migration of membrane proteins on SDS-PAGE can results in « gel shifting » due to the presence of hairpins (helix-loop-helix)<sup>1-3</sup>.*

### References :

1 – Rath A., et al., Detergent binding explains anomalous SD-PAGE migration of membrane proteins PNAS, 2009 Feb 10, vol. 106

2 – Rath A., et al., Acrylamide concentration determines the direction and magnitude of helical membrane protein gel shifts, PNAS, 2013 Sep 24, 110(39)

3 – Rath A., et al., Correction factors for membrane protein molecular weight readouts on sodium dodecyl sulfate-polyacrilamide gel electrophoresis, Anal. Biochem., 2013 Mar 1, 434(1)



**Fig.1:** Identification of CLDN18.2 in the proteoliposomes by Western Blot (using an anti-6xHis antibody).

## Formulation

**Buffer:** Available in Hepes 50 mM, pH 7.5 with cryoprotectants. Other buffers or customized formulation can be provided upon request.

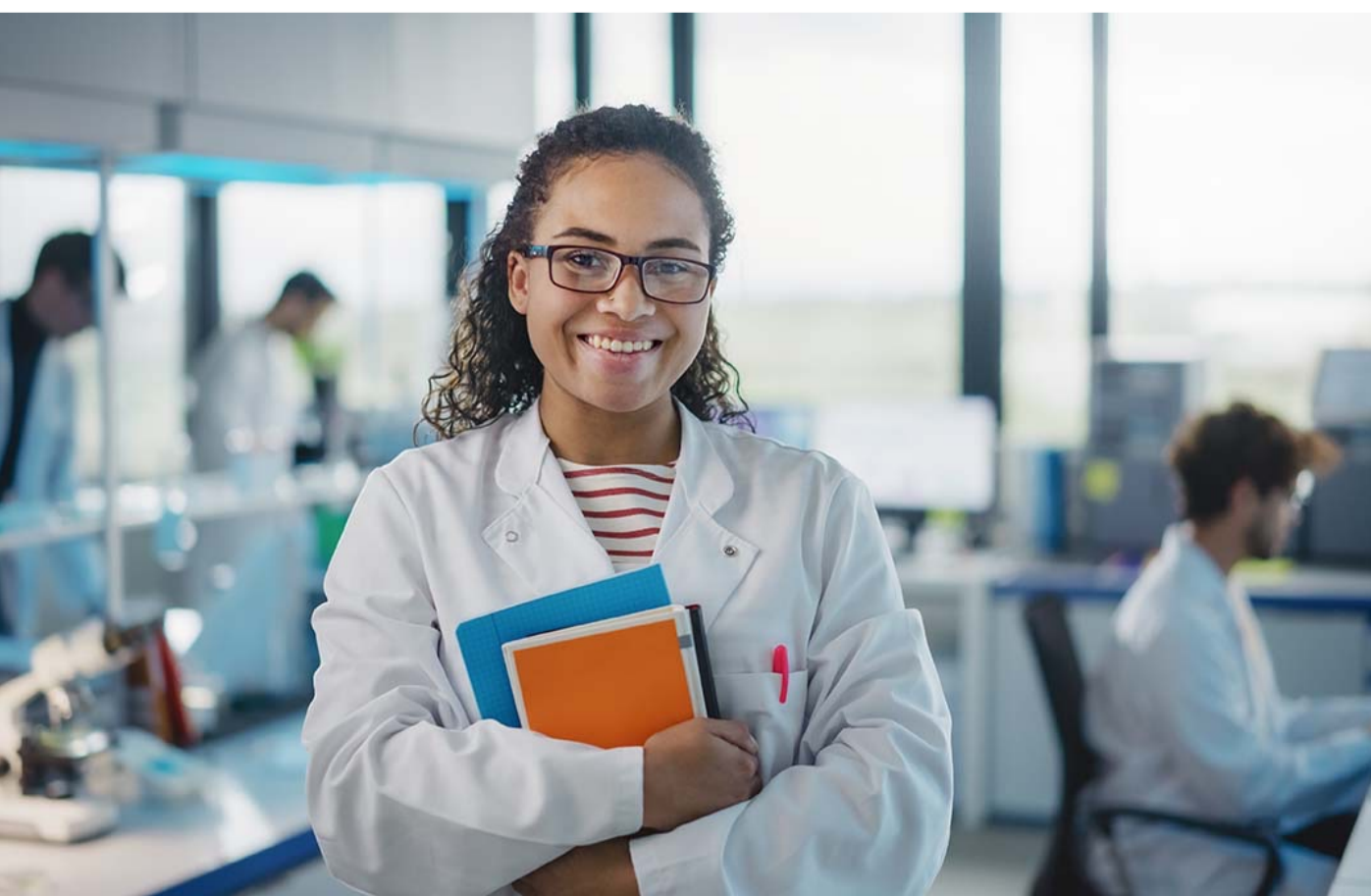
**Customized Hydrophobic matrix:** Customized formulation with specific lipids like PEGylated or biotinylated lipids can be used upon request, as well as targeting molecules.

**Storage/Stability:** Store at +4°C for up to one week or several months at -80°C. Aliquot for storage.

Do not freeze-thaw after aliquoting.

**Use restrictions:** For life science research use only.

**Available sizes:** 10 µg, 50 µg, 100 µg, customized quantity on request.



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