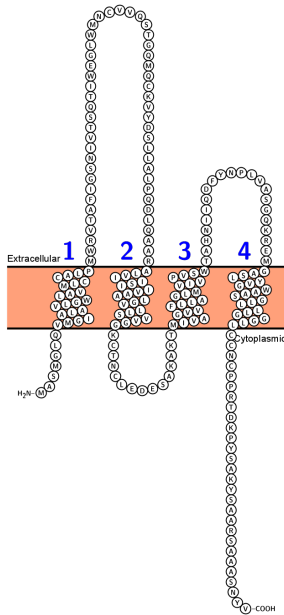


# Claudin-4

Organism: Homo sapiens (Human) | Gene names: CLDN4, CPER, CPETR1, WBSCR8



**Entry:** O14493

**Mass:** 22.077 Da

**Transmembrane:** 4

**Subcellular location:** Cell junction, tight junction

{ECO:0000250|UniProtKB:O35054}. Cell membrane

{ECO:0000269|PubMed:20375010}, Multi-pass

membrane protein {ECO:0000255}. Note=CLDN4 is

required for tight junction localization in the kidney.

{ECO:0000250|UniProtKB:O35054}.

**Cofactor:** -

**Extinction coefficient:** 1.922

**Isoelectric Point:** 8.38

**PubMed ID:** 9334247, 15489334, 16236711, 20375010,
























21269460, 27647526

**Family:** -
























## Function:

Channel-forming tight junction protein that mediates paracellular chloride transport in the kidney. Plays a critical role in the paracellular reabsorption of filtered chloride in the kidney collecting ducts. Claudins play a major role in tight junction-specific obliteration of the intercellular space, through calcium-independent cell-adhesion activity. {ECO:0000250|UniProtKB:O35054}.

**Data from experiment(s): Hek293 membrane pellets**

DIBMA 10	 0.263698	DIBMA 12	 0.297544
DIBMA Glycerol	 0.349633	DIBMA Glucosamine	 0.488168
Amphipol 17	 0.367378	Amphipol 18	 0.624801
AASTY 6-45	 NaN	AASTY 11-45	 NaN
AASTY 6-50	 NaN	AASTY 11-50	 NaN
AASTY 6- 55	 NaN	AASTY 11- 55	 NaN
SMALP 502-E	 0.513197	SMALP 140-I	 NaN
SMALP 300	 NaN	SMALP 200	 0.65147
SMALP 140	 NaN	DDM	 0.67855
DM	 0.830982	LMNG	 0.722431
Fos-12	 0.722711	Digitonin-A	 0.575347
RIPA	 0.373794		

**Data from experiment(s): Hek293 membrane pellets 1 %**

DIBMA 10	 No data	DIBMA 12	 No data
DIBMA Glycerol	 No data	DIBMA Glucosamine	 No data
Amphipol 17	 No data	Amphipol 18	 No data
AASTY 6-45	 No data	AASTY 11-45	 No data
AASTY 6-50	 No data	AASTY 11-50	 No data
AASTY 6- 55	 No data	AASTY 11- 55	 No data
SMALP 502-E	 No data	SMALP 140-I	 No data
SMALP 300	 No data	SMALP 200	 No data
SMALP 140	 No data	DDM	 No data
DM	 No data	LMNG	 No data
Fos-12	 No data	Digitonin-A	 No data
RIPA	 No data		

**Involvement in disease:**

Note=CLDN4 is located in the Williams-Beuren syndrome (WBS) critical region. WBS results from a hemizygous deletion of several genes on chromosome 7q11.23, thought to arise as a consequence of unequal crossing over between highly homologous low-copy repeat sequences flanking the deleted region.

**Binding site:**

-

**Tissue specificity:**

-

**3D (X-ray crystallography):**

X-ray crystallography (2)

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**Pharmaceutical use:**

-

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**AS sequence:**

MASMGLQVMGIALAVLGWLAVMLCCALPMWRVTAFIGSNIVTSQTIWEGLWMNCVVQSTGQMCKVYDSSLALPQDLQAAR  
ALVIISIIVAALGVLLSVVGGKCTNCLEDESAKAKTMIVAGVVFLLAGLMVIVPVSWTAHNIIQDFYNPLVASGQKREMGASLYVG  
WAASGLLLLGGLLCCNCPPRTDKPYSAKYSAARSAAASNYV

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**Creditnotes:**

The protein visualizations are generated with the help of Protter:

Omasits, U., Ahrens, C.H., MÃ¼ller, S., Wollscheid, B. "Protter: interactive protein feature visualization and integration with experimental proteomic data". *Bioinformatics*. 2014 Mar 15; **30**(6):884-6. doi: 10.1093/bioinformatics/btt607.

IP and extinction coefficients are gathered from Protparam by ExPASy:

Gasteiger, E., Hoogland, C., Gattiker, A., Duvaud, S., Wilkins, M.R., Appel, R.D., Bairoch, A. "Protein Identification and Analysis Tools on the ExPASy Server". (In) *John M. Walker (ed): The Proteomics Protocols Handbook*, Humana Press (2005). pp. 571-607

The basic knowledge is found on UniProt:

The UniProt Consortium. "UniProt: the universal protein knowledgebase in 2021". *Nucleic Acids Res.* **49**:D1 (2021)

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