

## Product datasheet for **RC204466**

### Claudin 1 (CLDN1) (NM\_021101) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Claudin 1 (CLDN1) (NM_021101) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Claudin 1
Synonyms:	CLD1; ILVASC; SEMP1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC204466 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCCAACGCGGGGCTGCAGCTGTTGGGCTTCATTCTCGCCTTCTGGGATGGATCGGCGCCATCGTCA  
GCACTGCCCTGCCCCAGTGGAGGATTTACTCCTATGCCGGCGACAACATCGTGACCGCCAGGCCATGTA  
CGAGGGGCTGTGGATGTCCTGCGTGTGCGAGAGCACCGGGCAGATCCAGTGCAAAGTCTTTGACTCCTTG  
CTGAATCTGAGCAGCACATTGCAAGCAACCCGTCCTTGATGGTGGTGGCATCCTCTGGGAGTGATAG  
CAATCTTTGTGGCCACCGTTGGCATGAAGTGTATGAAGTGCTTGAAGACGATGAGGTGCAGAAGATGAG  
GATGGCTGTCAATGGGGCGCGATATTTCTTTCAGGCTGGCTATTTAGTTGCCACAGCATGGTAT  
GGCAATAGAATCGTTCAAGAATTCTATGACCCTATGACCCAGTCAATGCCAGGTACGAATTTGGTCAGG  
CTCTCTTCACTGGCTGGGCTGCTGCTTCTCTGCTTCTGGGAGGTGCCCTACTTTGCTGTTCTGCTCC  
CCGAAAAACAACCTCTTACCCAACCAAGGCCATCCAAAACCTGCACCTTCCAGCGGAAAGACTAC  
GTG

**ACGCGT**ACGCGGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC204466 protein sequence  
 Red=Cloning site Green=Tags(s)

MANAGLQLLGFILAFILGWIGAVSTALPQWRIYSYAGDNIVTAQAMYEGLWMSCVSQSTGGQIQCKVFDLS  
 LNLSSTLQATRALMVVGILLGVIAIFVATVGMKCMKCLEDEDEVQKMRMAVIGGAIFLLAGLAILVATAWY  
 GNRIVQEFYDPMTPVNARYEFGQALFTGWAAASLCLLGGALLCCSCPRKTTSYTPRPPYKPPAPSSGKDY  
 V

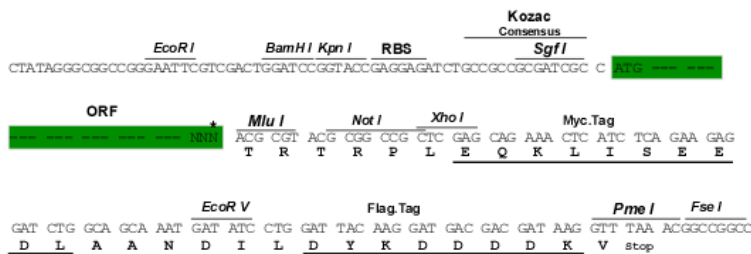
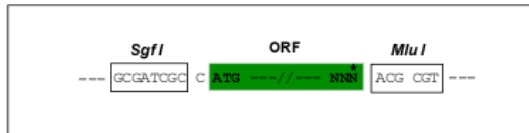
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6014\\_d09.zip](https://cdn.origene.com/chromatograms/mk6014_d09.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_021101

**ORF Size:** 633 bp

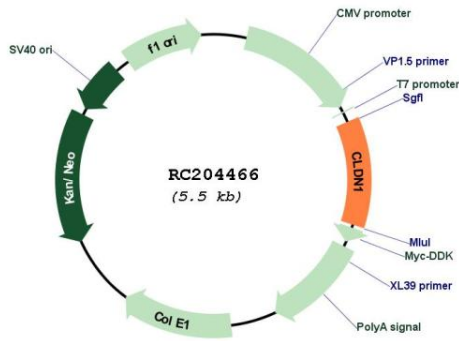
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

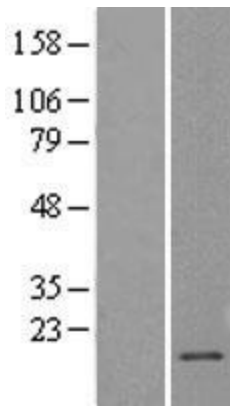
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.</li></ol>
<b>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<a href="#">NM_021101.1</a>
<b>RefSeq Size:</b>	3452 bp
<b>RefSeq ORF:</b>	636 bp
<b>Locus ID:</b>	9076
<b>UniProt ID:</b>	<a href="#">O95832</a>
<b>Cytogenetics:</b>	3q28
<b>Domains:</b>	PMP22_Claudin
<b>Protein Families:</b>	Transmembrane
<b>Protein Pathways:</b>	Cell adhesion molecules (CAMs), Leukocyte transendothelial migration, Pathogenic Escherichia coli infection, Tight junction
<b>MW:</b>	22.7 kDa
<b>Gene Summary:</b>	Tight junctions represent one mode of cell-to-cell adhesion in epithelial or endothelial cell sheets, forming continuous seals around cells and serving as a physical barrier to prevent solutes and water from passing freely through the paracellular space. These junctions are comprised of sets of continuous networking strands in the outwardly facing cytoplasmic leaflet, with complementary grooves in the inwardly facing extracytoplasmic leaflet. The protein encoded by this gene, a member of the claudin family, is an integral membrane protein and a component of tight junction strands. Loss of function mutations result in neonatal ichthyosis-sclerosing cholangitis syndrome. [provided by RefSeq, Jul 2008]

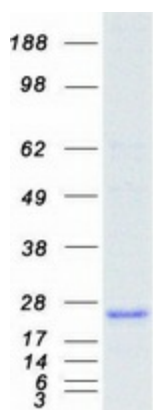
Product images:



Circular map for RC204466



Western blot validation of overexpression lysate (Cat# [LY402832]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204466 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CLDN1 protein (Cat# [TP304466]). The protein was produced from HEK293T cells transfected with CLDN1 cDNA clone (Cat# RC204466) using MegaTran 2.0 (Cat# [TT210002]).