

## Product datasheet for **RC209263**

### **CAT1 (SLC7A1) (NM\_003045) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	CAT1 (SLC7A1) (NM_003045) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CAT1
Synonyms:	ATRC1; CAT-1; ERR; HCAT1; REC1L
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC209263 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGGGTGCAAAATCCTGCTCAACATTGGGCAGCAGATGCTGCGCGGAAGTGGTGGACTGTAGCCGGG  
 AGGAGACGCGGCTGTCTCGCTGCCTGAACACTTTTGATCTGGTGGCCCTCGGGGTGGGCAGCACACTGGG  
 TGCTGGTGTCTACGTCTGGCTGGAGCTGTGGCCCGTGAGAATGCAGGCCCTGCCATTGTCATCTCCTTC  
 CTGATCGCTGCGCTGGCCTCAGTGTGGCTGGCCTGTGCTATGGCGAGTTTGGTGTCTGGGTCCCAAGA  
 CGGGCTCAGCTTACCTCTACAGCTATGTACCCTGGAGAGCTCTGGGCCTTCATCACCGCTGGAACCT  
 AATCCTCTCTACATCATCGTACTTCAAGCGTAGCGAGGGCCTGGAGCGCCACCTTCGACGAGCTGATA  
 GGCAGACCCATCGGGGAGTTCTCACGGACACACATGACTCTGAACGCCCCGCGCTGTGGCTGAAAACC  
 CCGACATATTCGAGTGATCATAATTCTCATCTTGACAGGACTTTAACTCTTGGTGTGAAAGAGTCGGC  
 CATGGTCAACAAAATATCACTTGTATTAACGTCTGGTCTGGGCTTCATAATGGTGTGAGGATTTGTG  
 AAAGGATCGGTTAAAACTGGCAGCTCACGGAGGAGGATTTGGGAACACATCAGGCCGTCTCTGTTTGA  
 ACAATGACACAAAAGAAGGAAGCCCGGTGTTGGTGGATTTCATGCCCTTCGGGTTCTCTGGTGTCTGTG  
 GGGGGCAGCGACTTGCTTCTATGCCCTTCGTGGGCTTTGACTGCATCGCCACCACAGGTGAAGAGGTGAAG  
 AACCCACAGAAGGCCATCCCGTGGGATCGTGGCGTCCCTTTGATCTGCTTTCATCGCCTACTTTGGGG  
 TGTGCGCTGCCCTCACGCTCATGATGCCCTACTTCTGCTGGACAATAACAGCCCCCTGCCCGACGCTT  
 TAAGCAGTGGCTGGGAAGGTGCAAGTACGAGTGGCCGTGGGCTCCCTCTGCGCTCTTCCGCCAGT  
 CTTCTAGGTTCCATGTTCCCATGCCTCGGTTATCTATGCCATGGTGGATGGACTGCTATTTAAAT  
 CTTAGCCAACGTCAATGATAGGACCAAAACCAATAATCGCCACATTAGCCTCGGGTCCGCTTGTCTGC  
 TGTGATGGCCTTCTCTTTGACCTGAAGGACTTGGTGGACCTCATGTCCATTGGCACTCTCTCTGGCTTAC  
 TCGTTGGTGGCTGCCTGTGTGTTGGTCTTACGGTACCAGCCAGAGCAGCCTAACCTGGTATACCAGATGG  
 CCAGTACTCCGACGAGTTAGATCCAGCAGACAAAATGAATTGGCAAGCACAATGATCCAGCTGGG  
 GTTTTTACCAGAGGCAGAGATGTTCTCTTTGAAAACCACTCTCACCAAAAACATGGAGCCTTCCAAA  
 ATCTCTGGGCTAATTGTGAACATTTCAACCAGCCTTATAGCTGTTCTCATCATCACCTTCTGCATTGTGA  
 CCGTGTCTGGAAGGGAGGCTCTACCAAGGGGCGCTGTGGCAGTCTTCTGCTCGCAGGCTGTCCT  
 CCTCTGTGCCGTGGTACGGGCGTCTGAGGAGCAGCCGAGAGCAAGCAAGCTCTCATTAAAGGTT  
 CCCTTCTGCCAGTGTCCCATCTGAGCATCTTCGTGAACGTCTATCTCATGATGCAGCTGGACCAGG  
 GCACCTGGGTCGGTTTGTGTGGATGCTGATAGGCTTCATCATCTACTTTGGCTATGGCCTGTGGCA  
 CAGCGAGGAGGCTCCCTGGATGCCGACCAAGCAAGGACTCTGACGGCAACTTGGACCAGTGAAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC209263 protein sequence  
 Red=Cloning site Green=Tags(s)

MGCKVLLNIGQQMLRRKVVDCSREETRLSRCLNTFDLVALGVGSTL GAGVYVLAGAVARENAGPAIVISF  
 LIAALASVLAGLCYGEFGARVPKTGSAYLYSYVTVGELWAFITGWNLILSYIIGTSSVARAWSATFDELI  
 GRPIGEFSRTHMTLNAPGVLAENPDIFAVIIILITGLLTLGVKESAMVNIIFTCINVLVLFIMVSGFV  
 KGSVKNWQLTEEDFGNTSGRLCLNNDTKEGKPGVGGFMPFGSGVLGAATCFYAFVGFDCIATTGEEVK  
 NPQKAIPVGIVASLLICFIAYFGVSAAL TLMMPYFCLDNNSP LPAFKHVGWEGAKYAVAVGSLCALSAS  
 LLGSMFMPRVIYAMAEDLLFKFLANVNDRTKPIIATLASGAVAAVMAFLFDLKDLDLMSIGTLLAY  
 SLVAACVLVLRYPQPNLVYQMASTSDLPADQNELASTNDSQLGFLPEAEMFSLKTI LSPKNMEPSK  
 ISGLIVNISTSLIAVLIITFCIVTVL GREALTKGALWAVFLLAGSALLCAVVTGVIWRQPESKTKLSFKV  
 PFLPVLPILSIFVNVYLMMLDQGTWVRFVWMLIGFIIYFGYGLWHSEEASLDADQARTPDGNLDQCK

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6345\\_c04.zip](https://cdn.origene.com/chromatograms/mk6345_c04.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_003045

**ORF Size:** 1887 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).

- Reconstitution Method:**
1. Centrifuge at 5,000xg for 5min.
  2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
  3. Close the tube and incubate for 10 minutes at room temperature.
  4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
  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.

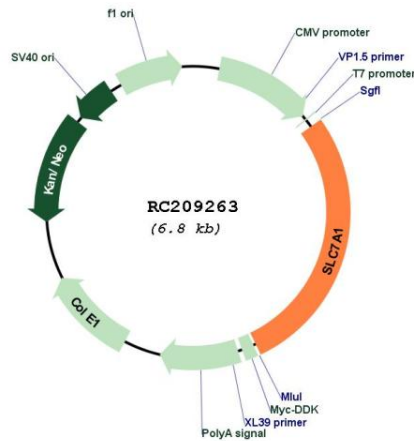
**RefSeq:** [NM\\_003045.4](#)

**RefSeq Size:** 7357 bp

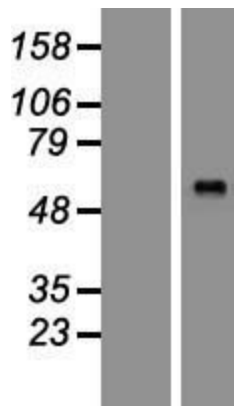
**RefSeq ORF:** 1890 bp

**Locus ID:** 6541  
**UniProt ID:** [P30825](#)  
**Cytogenetics:** 13q12.3  
**Domains:** aa\_permeases  
**Protein Families:** Druggable Genome, Transmembrane  
**MW:** 67.6 kDa  
**Gene Summary:** High-affinity, low capacity permease involved in the transport of the cationic amino acids (arginine, lysine and ornithine) in non-hepatic tissues.[UniProtKB/Swiss-Prot Function]

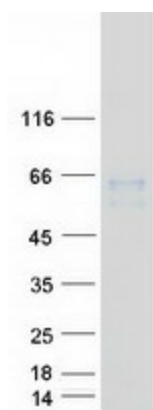
### Product images:



Circular map for RC209263



Western blot validation of overexpression lysate (Cat# [LY418941]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC209263 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified SLC7A1 protein (Cat# [TP309263]). The protein was produced from HEK293T cells transfected with SLC7A1 cDNA clone (Cat# RC209263) using MegaTran 2.0 (Cat# [TT210002]).