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# Product datasheet for SC112868

## SLC5A7 (NM_021815) Human Untagged Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | SLC5A7 (NM_021815) Human Untagged Clone |
| **Tag:** | Tag Free |
| **Symbol:** | SLC5A7 |
| **Synonyms:** | CHT; CHT1; CMS20; HMN7A |
| **Mammalian Cell Selection:** | None |
| **Vector:** | pCMV6-XL5 |
| **E. coli Selection:** | Ampicillin (100 ug/mL) |

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**Fully Sequenced ORF:**

>OriGene ORF within SC112868 sequence for NM_021815 edited (data generated by NextGen Sequencing)

ATGGCTTTCCATGTGGAAGGACTGATAGCTATCATCGTGTTCTACCTTCTAATTTTGCTG
GTTGGAATATGGGCTGCCTGGAGAACCAAAAACAGTGGCAGCGCAGAAGAGCGCAGCGAA
GCCATCATAGTTGGTGGCCGAGATATTGGTTTATTGGTTGGTGGATTTACCATGACAGCT
ACCTGGGTCGGAGGAGGGTATATCAATGGCACAGCTGAAGCAGTTTATGTACCAGGTTAT
GGCCTAGCTTGGGCTCAGGCACCAATTGGATATTCTCTTAGTCTGATTTTAGGTGGCCTG
TTCTTTGCAAAACCTATGCGTTCAAAGGGGTATGTGACCATGTTAGACCCGTTTCAGCAA
ATCTATGGAAAACGCATGGGCGGACTCCTGTTTATTCCTGCACTGATGGGAGAAATGTTC
TGGGCTGCAGCAATTTTCTCTGCTTTGGGAGCCACCATCAGCGTGATCATCGATGTGGAT
ATGCACATTTCTGTCATCATCTCTGCACTCATTGCCACTCTGTACACACTGGTGGGAGGG
CTCTATTCTGTGGCCTACACTGATGTCGTTCAGCTCTTTTGCATTTTTGTAGGGCTGTGG
ATCAGCGTCCCCTTTGCATTGTCACATCCTGCAGTCGCAGACATCGGGTTCACTGCTGTG
CATGCCAAATACCAAAAGCCGTGGCTGGGAACTGTTGACTCATCTGAAGTCTACTCTTGG
CTTGATAGTTTTCTGTTGTTGATGCTGGGTGGAATCCCATGGCAAGCATACTTTCAGAGG
GTTCTCTCTTCTTCCTCAGCCACCTATGCTCAAGTGCTGTCCTTCCTGGCAGCTTTCGGG
TGCCTGGTGATGGCCATCCCAGCCATACTCATTGGGGCCATTGGAGCATCAACAGACTGG
AACCAGACTGCATATGGGCTTCCAGATCCCAAGACTACAGAAGAGGCAGACATGATTTTA
CCAATTGTTCTGCAGTATCTCTGCCCTGTGTATATTTCTTTCTTTGGTCTTGGTGCAGTT
TCTGCTGCTGTTATGTCATCAGCAGATTCTTCCATCTTGTCAGCAAGTTCCATGTTTGCA
CGGAACATCTACCAGCTTTCCTTCAGACAAAATGCTTCGGACAAAGAAATCGTTTGGGTT
ATGCGAATCACAGTGTTTGTGTTTGGAGCATCTGCAACAGCCATGGCCTTGCTGACGAAA
ACTGTGTATGGGCTCTGGTACCTCAGTTCTGACCTTGTTTACATCGTTATCTTCCCCCAG
CTGCTTTGTGTACTCTTTGTTAAGGGAACCAACACCTATGGGGCCGTGGCAGGTTATGTT
TCTGGCCTCTTCCTGAGAATAACTGGAGGGGAGCCATATCTGTATCTTCAGCCCTTGATC
TTCTACCCTGGCTATTACCCTGATGATAATGGTATATATAATCAGAAATTTCCATTTAAA
ACACTTGCCATGGTTACATCATTCTTAACCAACATTTGCATCTCCTATCTAGCCAAGTAT
CTATTTGAAAGTGGAACCTTGCCACCTAAATTAGATGTATTTGATGCTGTTGTTGCAAGA
CACAGTGAAGAAAACATGGATAAGACAATTCTTGTCAAAAATGAAAATATTAAATTAGAT
GAACTTGCACTTGTGAAGCCACGACAGAGCATGACCCTCAGCTCAACTTTCACCAATAAA
GAGGCCTTCCTTGATGTTGATTCCAGTCCAGAAGGGTCTGGGACTGAAGATAATTTACAG
TGA

Clone variation with respect to NM_021815.2

**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM_021815 unedited

GAATACGACTCACTATAGGGCGGCCGCGAATTCGGCACGAGGCTTTCGCGTGCAGCCACC
ACTCCAGAAGACTTAATGAAGTAGCCAGCTGCAGAAGAATCTGGATCATTAGATAAAAAT
GGCTTTCCATGTGGAAGGACTGATAGCTATCATCGTGTTCTACCTTCTAATTTTGCTGGT
TGGAATATGGGCTGCCTGGAGAACCAAAAACAGTGGCAGCGCAGAAGAGCGCAGCGAAGC
CATCATAGTTGGTGGCCGAGATATTGGTTTATTGGTTGGTGGATTTACCATGACAGCTAC
CTGGGTCGGAGGAGGGTATATCAATGGCACAGCTGAAGCAGTTTATGTACCAGGTTATGG
CCTAGCTTGGGCTCAGGCACCAATTGGATATTCTCTTAGTCTGATTTTAGGTGGCCTGTT
CTTTGCAAAACCTATGCGTTCAAAGGGGTATGTGACCATGTTAGACCCGTTTCAGCAAAT
CTATGGAAAACGCATGGGCGGACTCCTGTTTATTCCTGCACTGATGGGAGAAATGTTCTG
GGCTGCAGCAATTTTCTCTGCTTTGGGAGCCACCATCAGCGTGATCATCGATGTGGATAT
GCACATTTCTGTCATCATCTCTGCACTCATTGCCACTCTGTACACACTGGTGNGGAGGGC
TCTATTCTGTGGCCTACACTGATGTCGTTCAGCTCTTTTGCATTTTTGTAGGGCTGTGGA
TCAGCGTNCCCTTTGCATGTCACATCCTGCAGTCGAGACATCGGGTTCACTGCTGTGCAT
GCCAATACCAAAGCCGTGCTGGNGAACTGTGACTCTCTGAAGNCTACTCTGCTTGAAAGN
TTTCTGTGGTGAAGCTGGGGGGAATCCTGCAAGCTACTTTTTAAAGGTTTTTTTTTTTCT
CAGCACTAAG

**3' Read Nucleotide Sequence:**

```
>OriGene 3' read for NM_021815 unedited
TCTAGAGTCGAGNNNTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT
AATTNAAAGCATAATTTTATATAATAATTTGACAAACAAAAATATTTGTTTTAAAACCAT
TATTTGCCTTTGTCTTTGAAGTACCAAACGTCCAATAAATTCCCCCTCTTCCCCGGGTAA
ATTTACCTGAAGGCTAAACCAAAAAAAAAAATCTTAATTTATGTTAAAAATATAAGGGTA
ATTTATTATTCCCAAGTAAAAAAAGGAATACCCCTTTTATTAAATTCACTTATTTTAAGC
TTATATTCGTTTCATAGGCACATAAAATTCATTACTTGTAAGGGTACCAATGAAGTTGTA
TTTTGATGCTGTTTGAAACAACTTGTTGTTGATATTGCAGTCCACCTACAAGCTTGCTGA
TTTGAATATGTGGGGGAAAACAAACCTTTTAAATTCCTCAAGAAATATGTTCCATTCTTA
TCAAAAGTTTGAAAATAAAATATAGGTTTTCTTCTAATGTTTTATCCACAGGTGTTGCCT
TCCCAAATAAAAAAGCCATTGGCAAAAATGTTCCGTTATTTTTTTNTTCTTCTGAGGGCA
AATTTTGAAAATCAGGCTTACTGGATTGAACCTGGAAAAACCTGTAAATGTCTGCTTTAC
TTATTTTTGTAAACCACAGCCATTGAGGGGCCAAAGTATCCTTTTCGCCATTTAACAACT
TTGGGAACACCTGTTTGTGAAAATGGGGTGAAATCTATGCCCAAGTGGCTAAGTAAAACC
TTGGGCCATTGTTTCCTCCTTGCATTTTAAATTTTTGACTTAAAAACATTTGCCAACTTA
ACCTTTTGGGGATAAAACAACTACCTTTGTTACCACTTTGGGGGCGGGAGGAAAAGGGGC
AACACCCAAATTTTTTTGGGTCAAATTTAAGTTTAGTTTAGCCTTGAACGGAAATTTTCC
TGTTTTGTTTGTGAAATGATACCGGAAAATTTCTGGAACTTTTTCCCTGAATG
```

**Restriction Sites:** NotI-NotI

**ACCN:** NM_021815

**Insert Size:** 5310 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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

**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_021815.2, NP_068587.1

| | |
|---|---|
| **RefSeq Size:** | 5158 bp |
| **RefSeq ORF:** | 1743 bp |
| **Locus ID:** | 60482 |
| **UniProt ID:** | Q9GZV3 |
| **Cytogenetics:** | 2q12.3 |
| **Domains:** | SSF |
| **Protein Families:** | Transmembrane |
| **Gene Summary:** | This gene encodes a sodium ion- and chloride ion-dependent high-affinity transporter that mediates choline uptake for acetylcholine synthesis in cholinergic neurons. The protein transports choline from the extracellular space into presynaptic terminals for synthesis into acetylcholine. Increased choline uptake results from increased density of this protein in synaptosomal plasma membranes in response to depolarization of cholinergic terminals. Dysfunction of cholinergic signaling has been implicated in various disorders including depression, attention-deficit disorder, and schizophrenia. An allelic variant of this gene is associated with autosomal dominant distal hereditary motor neuronopathy type VIIA. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jul 2015] Transcript Variant: This variant (1) represents the longest transcript and encodes the longest isoform (a). Variants 1 and 2 both encode the same isoform (a). Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments. |