

## Product datasheet for RC221919

### SLC12A3 (NM\_000339) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	SLC12A3 (NM_000339) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SLC12A3
Synonyms:	NCC; NCCT; TSC
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC221919 representing NM_000339 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCCGCATCGCC

ATGGCAGAACTGCCACAACAGAGACGCCTGGGGACGCCACTTTGTGCAGCGGGCGCTTCACCATCAGCA  
CACTGCTGAGCAGTGATGAGCCCTCTCCACCAGCTGCCTATGACAGCAGCCACCCAGCCACCTGACCCA  
CAGCAGCACCTTCTGCATGCGCACCTTTGGCTACAACACGATCGATGTGGTGCCACATATGAGCACTAT  
GCCAACAGCACCCAGCCTGGTGAGCCCCGAAGGTCGGGCCACACTGGCTGACCTGCACCTCTTCTCTCA  
AGCAGGAAGGCAGACACCTGCATGCCCTGGCCTTTGACAGCCGGCCAGCCACGAGATGACTGATGGCT  
GGTGGAGGGCGAGGCAGGCACCAGCAGCGAGAAGAACCCCGAGGAGCCAGTGCGCTTCGGCTGGGTCAAG  
GGGGTGATGATTGCTGATGCTCAACATTTGGGGCGTGATCCTCTACCTGCGGCTGCCCTGGATTACGG  
CCCAGGCAGGCATCGTCCTGACCTGGATCATCATCCTGTGTGGTACGGTGACCTCCATCACAGGCCT  
CTCCATCTCAGCCATCTCCACCAATGGCAAGGTCAGGTCAGGTCAGGTCACCTACTTCTCATCTCCCGGAGT  
CTGGGCCAGAGCTTGGGGGCTCCATCGGCCTCATTTTCGCTTTCGCAATGCCGTGGGTGTGGCCATGC  
ACACGGTGGCTTTGCAGAGACCGTGCGGGACCTGCTCCAGGAGTATGGGGCACCATCGTGGACCCCAT  
TAACGACATCCGCATCATTGGCGTGGTCTCGGTCACTGTGCTGCTGGCCATCTCCCTGGCTGGCATGGAG  
TGGGAGTCCAAGGCCAGGTGCTGTTCTTCTTGTGTCATCATGGTCTCCTTTGCCAACTTTAGTGGGGA  
CGCTGATCCCCCATCTGAGGACAAGGCCTCCAAGGCTTCTTCAGCTACCGGGCGGACATTTTTGTCCA  
GAACTTGGTGCCTGACTGGCGGGTCCAGATGGCACCTTCTTCGGAATGTTCTCCATCTTCTTCCCTCG  
GCCACAGGCATCCTGGCAGGGGCAACATATCTGGTGACCTCAAGGACCTGCTATAGCCATCCCCAAGG  
GGACCCTCATGGCCATTTCTGGACGACCATTTCTACCTGGCCATCTCAGCCACCATTTGGCTCCTGCGT  
GGTGCCTGATGCCTTGGGGTCTGAATGACACAGTGACCCCTGGCTGGGGTGCCTGCGAGGGGCTGGCC  
TGCAGCTATGGCTGGAATTCACCGAGTGACCCAGCAGCAGCTGCCACTACGGCCTCATCAACTATT  
ACCAGACCATGAGCATGGTGTGAGGCTTCGCGCCCTGATCACGGCTGGCATCTTCGGGGCCACCCTCTC  
CTCTGCCCTGGCTGCCTGTCTGCTGCCAAAGTCTTCCAGTGCCTTTCGAGGACCAGCTGTACCCA



[View online >](#)

```

CTGATCGGCTTCTTCGGCAAAGGCTATGGCAAGAACAAGGAGCCCGTGCCTGGCTACCTGCTGGCCTACG
CCATCGCTGTGGCCTTCATCATCATCGCTGAGCTCAACACCATAGCCCCATCATTTCCAACCTTCTTCT
CTGCTCCTATGCCTCATCAACTTCAGCTGCTTCCACGCCTCCATCACCACCTCGCTGGGTGGAGACCT
TCATTCCAATACTACAACAAGTGGGCGGCGCTGTTTGGGGCTATCATCTCCGTGGTCATCATGTTCTCC
TCACCTGGTGGGCGGCCCTCATCGCCATTGGCGTGGTGTCTTCTCCTGCTCTATGTATCTACAAGAA
GCCAGAGGTAATTTGGGGCTCCTCGGTACAGGCTGGCTCCTACAACCTGGCCCTCAGTACTCGGTGGGC
CTCAATGAGGTGGAAGACCACATCAAGAATACCGCCCCAGTGCCTGGTGTCTCACGGGGCCCCCAACT
TCCGCCCCGGCCCTGGTGGACTTTGTGGCACCTTCAACCCGGAACCTCAGCCTGATGATCTGTGGCCACT
GCTCATCGGACCCACAAGCAGAGGATGCTGAGCTCCAGCTCATCGCCAACGGGACACCAAGTGCTG
AACAAAGAGGAAGATCAAGGCCTTCTACTCGGATGTCATTGCCGAGGACCTCCGCAGAGGCGTCCAGATCC
TCATGCAGGCCGAGGTCTCGGGAGAATGAAGCCCAACATTCTGGTGGTTGGGTTCAAGAAGAACTGGCA
GTCGGCTCACCCGGCCACAGTGAAGACTACATTGGCATCCTCCATGATGCCTTTGATTTCAACTATGGC
GTGTGTGTCATGAGGATGCGGGAGGACTCAACGTGTCCAAGATGATGCAGGCGCACATTAACCCCGTGT
TTGACCCAGCGGAGGACGGGAAGGAAGCCAGGCCAGAGGTGCCAGGCCATCAGTCTCTGGCGCTTTGGA
CCCCAAGGCCCTGGTGAAGGAGGAGCAGGCCACCACCATTCTCCAGTCGGAGCAGGGCAAGAAGACCATA
GACATCTACTGGCTCTTTGACGATGGAGGCCTCACCTCCTCATTCCCTATCTCCTTGGCCGCAAGAGGA
GGTGGAGCAAATGCAAGATCCGTGTGTTCTGAGGCGGCCAGATTAACAGGATGGACCAGGAGAGAAAGGC
GATCATTTCTCTGCTGAGCAAGTTCGACTGGGATTCCATGAAGTCCACATCCTCCTGACATCAACCAG
AACCTCGGGCTGAGCACACCAAGAGGTTTGGAGCATGATTGCACCCTTCCGTCTGAATGATGGCTTCA
AGGATGAGGCCACTGTCAACGAGATGCGGCGGGACTGCCCTGGAAGATCTCAGATGAGGAGATTACGAA
GAACAGAGTCAAGTCCCTTCGGCAGGTGAGGCTGAATGAGATTGTGCTGGATTACTCCCGAGACGCTGCT
CTCATCGTCATCACTTTGCCATAGGGAGGAAGGGGAAGTGCCCCAGCTCGCTGTACATGGCCTGGCTGG
AGACCCGTGCCAGGACCTCAGACCTCCAGTCTCCTGATCCGAGGAAACCAGGAAAACGTGCTCACCTT
TACTGCCAG
    
```

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC221919 representing NM\_000339  
 Red=Cloning site Green=Tags(s)

```

MAELPTTETPGDATLCSGRFTISTLLSDEPSPPAAYDSSHPSHLTHSSTFCMRTFGYNTIDVVPTYEHY
ANSTQPGEPKVRPTLADLHSLFKQEGRHLHALAFDSRPSHEMTDGLVEGEAGTSSSEKNPEEPVRFGWVK
GVMIRCMLNIWGVILYLRLPWITAQAGIVLTWIIILLSVTVTSITGLSISAISTNGKVKSGGTYFLISRS
LGPELGGSIGLIFAFANAVGVAMHTVGF AETVRDLLQEYGAPIVDPINDIRIIGVSVTVLLAISLAGME
WESKAQVLFLLVIMVSFANYLVGTLIPPSKASKGFFSYRADIFVQNLVPDWRGPDGTFFGMFSIFFPS
ATGILAGANISGDLKDP AIAIPKGTLM AIFWTTISYLAISATIGSCVVRDASGVLNDTVTPGWGACEGLA
CSYGWNFTECTQQHSCHYGLINYYQTMSMVS GFAPLITAGIFGATLSSALACLVSAAKVFQCLCEDQLYP
LIGFFGKYGKNKEPVRGYLLAYAI AFAFIIIAELNTI APIISNFFLCSYALINFSCHFASITNSPGWRP
SFQYYNKWAALFGAII SVVIMFLLTWWAALIAIGVVL FLLLYVIYKKEPVNWGSSVQAGSYNLALSYSVG
LNEVEDHIKNYRPQCLVLTGPPNFRPALVDFVGTFRNLSLMICGHVLI GPHKQRPELQLIANGHTKWL
NKRKIKAFYSVDVIAEDLRRGVQILMQAAGLGRMKPNILVVGFKKNWQSAHPATVEDYIGILHDAFDNFYNG
VCVMRMREGLNVSKMMQAHINPVFDPAEDGKEASARGARPSVSGALDPKALVKEEQATTIFQSEQGKTI
DIYWL FDDGGLTLLIPYLLGRKRRWSKCKIRV FVGGQINRMDQERKAIISLLSKFRLGFHEVHILPDINQ
NPRAEHTKRFEDMIAPFRLNDGFKDEATVNEMRRDCPWKISDEEITKNRVKSLRQVRLNEIVLDYSRDAAL
LIVITLPIGRKGCPSPLYMAWLETLSQDLRPPVILIRGNQENVLTFYCQ
    
```

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk8001\\_a07.zip](https://cdn.origene.com/chromatograms/mk8001_a07.zip)

**Restriction Sites:**

SgfI-MluI

Cloning Scheme:



ACCN: NM\_000339

ORF Size: 3090 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\\_000339.2](#), [NP\\_000330.2](#)

RefSeq Size: 3131 bp

RefSeq ORF: 3093 bp

Locus ID: 6559

UniProt ID: [P55017](#)

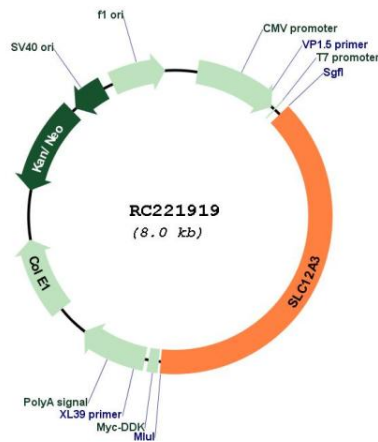
**Cytogenetics:** 16q13

**Protein Families:** Druggable Genome, Transmembrane

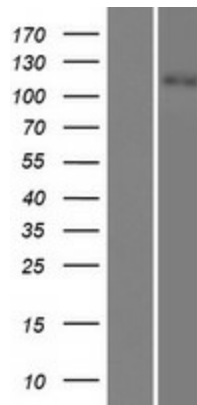
**MW:** 113.7 kDa

**Gene Summary:** This gene encodes a renal thiazide-sensitive sodium-chloride cotransporter that is important for electrolyte homeostasis. This cotransporter mediates sodium and chloride reabsorption in the distal convoluted tubule. Mutations in this gene cause Gitelman syndrome, a disease similar to Bartter's syndrome, that is characterized by hypokalemic alkalosis combined with hypomagnesemia, low urinary calcium, and increased renin activity associated with normal blood pressure. This cotransporter is the target for thiazide diuretics that are used for treating high blood pressure. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

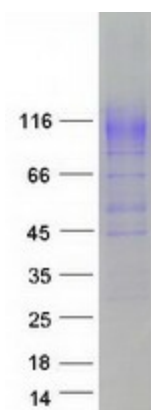
**Product images:**



Circular map for RC221919



Western blot validation of overexpression lysate (Cat# [LY424783]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC221919 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified SLC12A3 protein (Cat# [TP321919]). The protein was produced from HEK293T cells transfected with SLC12A3 cDNA clone (Cat# RC221919) using MegaTran 2.0 (Cat# [TT210002]).