

Product datasheet for **RG211244**

Sodium Iodide Symporter (SLC5A5) (NM_000453) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Sodium Iodide Symporter (SLC5A5) (NM_000453) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Sodium Iodide Symporter
Synonyms:	NIS; TDH1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG211244 representing NM_000453
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGAGGCCGTGGAGACCGGGAAACGGCCACCTTCGGAGCCTGGGACTACGGGGTCTTTGCCCTCATGC
 TCCTGGTGTCCACTGGCATCGGGCTGTGGTCTGGGCTGGCTCGGGCGGGCAGCGCAGCGCTGAGGACTT
 CTTACCGGGGGCCGGCCCTGGCGGCCCTGCCCGTGGGCTGTCTGCTGCTGCCAGCTTCATGTGGCC
 GTGCAGGTGCTGGGCGTCCGTCGGAGGCCTATCGCTATGGCCTCAAGTCTCTGGATGTGCCTGGCC
 AGCTTCTGAACCTCGGTCTCACCGCCCTGCTCTTCATGCCCTTCTACCGCTGGGCCTACCCAGCAC
 CTACGAGTACCTGGAGATGCGCTTCAGCCGCGCAGTGGGCTCTGCGGGACTTTGCAGTACATTGTAGCC
 ACGATGCTGTACACCGGCATCGTAATCTACGCACCGCCCTCATCTGAACCAAGTGACCGGGCTGGACA
 TCTGGGCGTCTGCTCCACCGGAATTATCTGCACCTTCTACACGGCTGTGGGCGCATGAAGGCTGT
 GGTCTGGACTGATGTGTTCCAGGTGCTGGTGTGCTAAGTGGCTTCTGGGTTGCTCTGGCACGGGTGTC
 ATGCTTGTGGGCGGGCCCGCCAGGTAACGCTACGCTGGCCAGAACCACTCCCGGATCAACCTCATGGACT
 TTAACCTGACCCGAGGAGCCGCTATACATTCTGGACTTTTGTGGTGGTGGCACGTTGGTGTGGCTCTC
 CATGTATGGCGTGAACAGGCGCAGGTGCACGCTACGTGGCTTCCCGCACAGAGAAGCAGGCCAAGCTG
 GCCCTGCTCATCAACAGGTCCGCTGTTCTGATCGTGTCCAGCGCTGCCTGCTGTGGCATCGTCATGT
 TTGTGTTCTACACTGACTGCGACCTCTCTCTGGGCGCATCTCTGCCCCAGACCAGTACATGCCTCT
 GCTGGTGTGGACATCTCGAAGATCTGCTGGAGTCCCCGGGCTTTTCTGGCCTGTGCTTACAGTGGC
 ACCCTCAGCACAGCATCCACCAGCATCAATGCTATGGTGCAGTCACTGTAGAAGACCTCATCAAACCTC
 GGCTCGGAGCCTGGCACCCAGAACTCGTGATTATCTCCAAGGGGCTCTCACTCATCTACGGATCGGC
 CTGTCTACCGTGGCAGCCCTGTCTCACTGCTCGGAGGAGGTCTCTTACAGGGCTCCTTACCGTCATG
 GGAGTCATCAGCGGCCCTGCTGGGAGCCTTCATCTTGGGAATGTTCTGCCGGCTGCAACACACCGG
 GCGTCTCGCGGGACTAGGCGCGGGCTTGGCGTGTGCTGTGGTGGCCTTGGGCGCCACGCTGTACCC
 ACCCAGCGAGCAGACCATGAGGGTCTGCCATCGTCGGCTGCCCGCTGCTGGTCTCTCAGTCAACGCC
 TCTGGCCTCTGGACCGGCTCTCTCCCTGCTAACGACTCCAGCAGGGCCCCCAGCTCAGGAATGGACG
 CCAGCCGACCCGCTTAGCTGACAGCTTCTATGCCATCTCTATCTATTACGGTGGCCTGGGCACGCT
 GACCACTGTGCTGTGCGGAGCCCTCATCAGCTGCCTGACAGGCCCAAGCGCAGCACCTGGCCCCG
 GGATTGTTGTGGTGGGACCTCGCACGGCAGACAGCATCAGTGGCCCCAAGGAAGAAGTGGCCATCTGG
 ATGACAACCTGGTCAAGGGTCTGAAGAACTCCCACTGGAAACAAGAAGCCCCCTGGCTTCTGCCAC
 CAATGAGGATCGTCTGTTTTCTTGGGGCAGAAGGAGCTGGAGGGGCTGGCTCTTGACCCCTGTGTT
 GGACATGATGGTGGTTCGAGACCAGCAGGAGACAAACCTC

ACGCGTACGCGGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG211244 representing NM_000453
 Red=Cloning site Green=Tags(s)

MEAVETGERPTFGAWDYGVFALMMLLVSTGIGLWVGLARGGQRSAEDFFTGGRRRLAALPVGLSLASFMSA
 VQVLGVPSEAYRYGLKFLWMCLGQLLNSVLTALLFMPVYRGLTSTYEYLEMRFSRAVRLCGTLQYIVA
 TMLYTGIVYAPALILNQVTGLDIWASLLSTGIICTFYTAVGGMKAVVWTDVVFQVVMLSGFVWVLARGV
 MLVGGPRQVLTLAQNHSRINLMDFNPDPRSRYTFWTFVVGGLVWL SMYGVNQAQVQRYVACRTEKQAKL
 ALLINQVGLFLIVSSAACCGIVMFVYTDCDPLLLGRISAPDQYMPLLVLDIFEDLPVGPGLFLACAYSG
 TLSTASTINAMAAVTVEDLIKPRRLSLAPRKLVIISKGLSLIYGSACLVAALSSLLGGVYLQGSFTVM
 GVISGPLLGAFLGMFLPACNTPGVLAGLGAGLALSLWVALGATLYPPSEQTMRVLPSSAARCVASVNA
 SGLLDPALLPANDSSRAPSSGMDASRPALADSFYAI SYLYYGALGTLTTVLCGALISCLTGPTKRSTLAP
 GLLWWDLARQTASVAPKEEVAILDDNLVKGPEELPTGNKKPPGFLPTNEDRLLFLLGQKELEGAGSWTPCV
 GHDGGRDQQETNL

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



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                                     Kozac
                                     Consensus
                                     Sgf I
EcoR I   BamH I Kpn I   RBS   _____   Asc I
CTATAGGGCGGCCGGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCCGGCGCCAGATCT

Hind III  Nhe I  Rsr II  Mlu I      Not I   Xho I      GFP Tag
CAAGCTTAAGTACTAGCTAGCGGACCG  ACG CGT  ACG CGG  CCG CTC GAG  ATG GAG AGC GAC -----
                                     T   R   T   R   P   L   E   M   E   S   D   -   -   -

                                     Pme I   Fse I
-----  GAA GAA AGA GTT TAA ACGGCCGGCCGCGGAGCT
- - - E E R V Stop
    
```

ACCN: NM_000453

ORF Size: 1929 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](#)

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_000453.1](#), [NP_000444.1](#)

RefSeq Size: 2490 bp

RefSeq ORF: 1932 bp

Locus ID: 6528

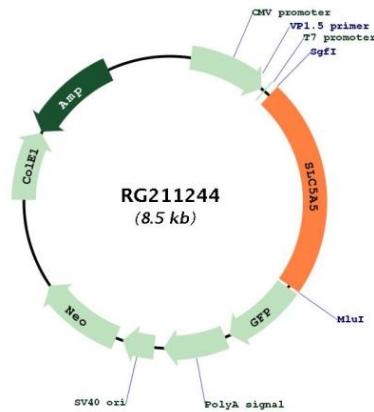
UniProt ID: [Q92911](#)

Cytogenetics: 19p13.11

Protein Families: Druggable Genome, Transmembrane

Gene Summary: This gene encodes a member of the sodium glucose cotransporter family. The encoded protein is responsible for the uptake of iodine in tissues such as the thyroid and lactating breast tissue. The iodine taken up by the thyroid is incorporated into the metabolic regulators triiodothyronine (T3) and tetraiodothyronine (T4). Mutations in this gene are associated with thyroid dyshormonogenesis 1.[provided by RefSeq, Sep 2009]

Product images:



Circular map for RG211244