

## Product datasheet for **RG214417**

### HCP1 (SLC46A1) (NM\_080669) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	HCP1 (SLC46A1) (NM_080669) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	SLC46A1
Synonyms:	G21; HCP1; PCFT
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG214417 representing NM\_080669  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGAGGGGAGCGCGAGCCCCCGAAAAGCCCCGCGCCCGCCCTGCGGGTGCCGTGCTGTGCCGGGGCC  
 CGGTAGAGCCGCTGGTCTTCTGGCCAACCTTGCCTTGGTCTGCAGGGCCCGCTCACCACGCAGTATCT  
 GTGGCACCGCTTACGCGCCGACCTCGGCTACAATGGCACCCGCCAAAGGGGGGGTGCAGCAACCGCAGC  
 GCGGACCCACCATGCAGGAAGTGAGACCCCTACCTCCCACTGGACCCTCTACATGAACGTGGGCGGT  
 TCCTGGTGGGCTCTTCTCGTCCACCCTGCTGGGAGCTTGGAGCGACAGTGTGGGCCCGCCCGCTGCT  
 AGTGTGGCTCGCTGGCCTGCTGCTCCAGGCCCTAGTGTCCGTTTTTGGTGCAGCTGCAGCTCCAC  
 GTCGGCTACTTCGTGCTGGTTCGCATCCTTTGTGCCCTCTCGGCGACTTCGGTGGCCTTCTGGCTGCTA  
 GCTTTGCGTCCGTGGCAGATGTCAGCTCCAGTGCAGCCGCACCTCCGGATGGCCCTGCTAGAAGCCAG  
 CATCGGGTGGCTGGGATGCTGGCAAGCCTCCTCGGGGGCCACTGGCTCCGGGCCAGGGTTATGCCAAC  
 CCCTTCTGGCTGGCCTTGGCCTTCTGCTGATAGCCATGACTCTCTATGCAGCTTTCTGCTTTGGTGAGACCT  
 TAAAGGAGCCAAAGTCCACCCGGCTCTTACGTTCCGTACCACCGATCCATTGTCCAGCTCTATGTGGC  
 TCCCGCCCCAGAGAAGTCCAGGAAACATTTAGCCCTCTACTACTGGCCATCTTCGTGGTGTACTGTG  
 CACTTTGGGGCCAGGACATCTTAACCTTTATGAAGTAAAGCACACCCCTCTGCTGGGACTCCAAACTAA  
 TCGGCTATGGTTCTGCAGCTCAGCATCTCCCTACCTCACCAGCCTGCTGGCCCTGAAGCTCCTGCAGTA  
 CTGCCTGGCCGATGCCTGGTAGCTGAGATCGGCTGGCCTCAACATCCTGGGGATGGTGGTCTTTGCC  
 TTTGCCACTATCACGCTCTCAAGCTGGTGGAGAGACAGAGCAGGGTGTCTCTTTCTGCTGTGGCCTG  
 TCATCCGGGCTAAACTCTCAAGCTGGTGGAGAGACAGAGCAGGGTGTCTCTTTCTGCTGTGGCCTG  
 TGTGAATAGCCTGGCCATGCTGACGGCCTCCGGCATCTTCAACTACTCTACCCAGCCACTCTGAACTTT  
 ATGAAGGGTTCCCTTCTCCTGGGAGCTGGCCTCTGCTCATCCCGGCTGTTCTGATTGGGATGCTGG  
 AAAAGGCTGATCCTCACCTCGAGTTCAGCAGTTCCCCAGAGCCCC

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:**

>RG214417 representing NM\_080669  
 Red=Cloning site Green=Tags(s)

MEGSASPPEKPRARPAAVLCRGPVEPLVFLANFALVLQGPLTTQYLWHRFSADLGYNGTRQRGGCSNRS  
 ADPTMQEVETLTSHWTL YMNVGFLVGLFSSTLLGAWSDSVGRRPLLVLASLGLLLQALVSFVVLQLH  
 VGYFVLGRILCALLGDFGLLAASFASVADVSSSRRTFRMALLEASIGVAGMLASLLGGHWLRAQGYAN  
 PFWLALALLIAMTLYAAFCFGETLKEPKSTRLF TFRHRSIVQLYVAPAPEKSRKHLALYSLAIFVVITV  
 HFGAQDILTLYELSTPLCWDSKLIYGSAQHLPYLTSLALKLLQYCLADAWVAEIGLAFNILGMVVFA  
 FATITPLMFTGYLLFLSLVITPVIRAKLSKLVRETEQGALFSAVACVNSLAML TASGIFNSLYPATLNF  
 MKGFPELLGAGLLLIPAVLIGMLEKADPHLEFQQFPQSP

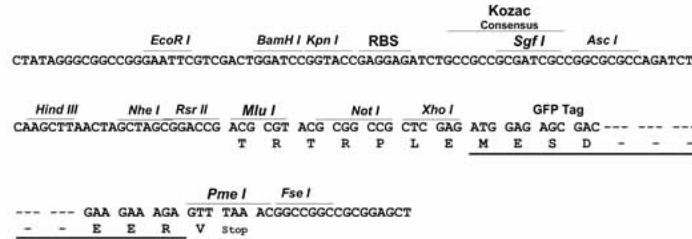
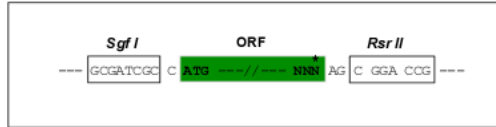
SGP**TRRRLE** – GFP Tag – V

**Restriction Sites:**

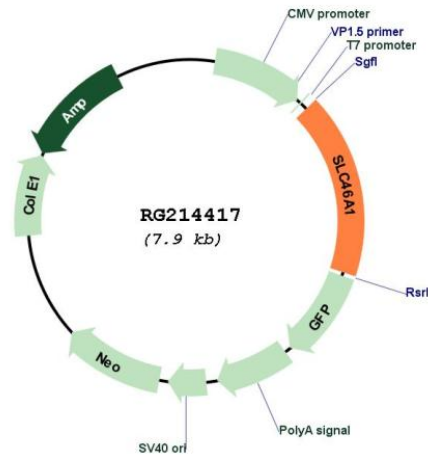
Sgfl-RsrII

Cloning Scheme:

Cloning sites used for ORF Shuttling:



Plasmid Map:



ACCN: NM\_080669

ORF Size: 1377 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.

<b>Components:</b>	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>RefSeq:</b>	<u><a href="#">NM_080669.2</a></u> , <u><a href="#">NP_542400.2</a></u>
<b>RefSeq Size:</b>	2096 bp
<b>RefSeq ORF:</b>	1380 bp
<b>Locus ID:</b>	113235
<b>UniProt ID:</b>	<u><a href="#">Q96NT5</a></u>
<b>Cytogenetics:</b>	17q11.2
<b>Protein Families:</b>	Transmembrane
<b>Gene Summary:</b>	This gene encodes a transmembrane proton-coupled folate transporter protein that facilitates the movement of folate and antifolate substrates across cell membranes, optimally in acidic pH environments. This protein is also expressed in the brain and choroid plexus where it transports folates into the central nervous system. This protein further functions as a heme transporter in duodenal enterocytes, and potentially in other tissues like liver and kidney. Its localization to the apical membrane or cytoplasm of intestinal cells is modulated by dietary iron levels. Mutations in this gene are associated with autosomal recessive hereditary folate malabsorption disease. Alternatively spliced transcript variants encoding different isoforms have been described for this gene. [provided by RefSeq, Aug 2013]