

Product datasheet for **RC204177**

Solute carrier family 22 member 5 (SLC22A5) (NM_003060) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Solute carrier family 22 member 5 (SLC22A5) (NM_003060) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Solute carrier family 22 member 5
Synonyms:	CDSP; OCTN2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC204177 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCGGGACTACGACGAGGTGACCGCCTTCTGGCGAGTGGGGCCCTCCAGCGCCTCATCTTCTTCC
 TGCTCAGCGCCAGCATCATCCCCAATGGCTTACCAGCCTGTCTCCGTGTTCTGATAGCGACCCCGGA
 GCACCGCTGCCGGGTGCCGGACGCCGGAACCTGAGCAGCGCCTGGCGCAACCACACTGTCCCACTGCGG
 CTGCGGGACGGCCGCGAGGTGCCCCACAGCTGCCGCCGTACCGCTCGCCACCATCGCCAACTTCTCGG
 CGCTTGGGCTGGAGCCGGGGCGGACGTGGACCTGGGCGAGTGGAGCAGGAGAGCTGTCCGGATGGCTG
 GGAGTTCAGTCAGGACGTCTACCTGTCCACCATTGTGACCGAGTGGAACTGGTGTGTGAGGACGACTGG
 AAGCCCCACTCACAATCTCTTGTCTCGTGGGTGTGTGTTGGGCTCCTTCATTTAGGGCAGCTGT
 CAGACAGGTTTGGCCGAAGAATGTGCTGTTCTGACCATGGGCATGCAGACAGGCTTCAGCTTCTGCA
 GATCTTCTCGAAGAATTTGAGATGTTTGTGCTGTTGCTGTTGCTTGTAGGCATGGCCAGATCTCCAAC
 TATGTGGCAGCATTTGTCTGGGACAGAAATCTTGGCAAGTCAGTTTGTATAATATTCTTACGTTAG
 GAGTGTGCATATTTATGCATTTGGCTACATGGTGTGCTGCCACTGTTTGGTACTTTCATCCGAGACTGGCG
 GATGCTGCTGGTGGCGCTGACGATGCCGGGGTGTATGCGTGGCACTCTGGTGGTTTCATCCCTGAGTCC
 CCCCAGTGGCTCATCTCTCAGGGACGATTTGAAGAGGCAGAGGTGATCATCCGCAAGGCTGCCAAAGCCA
 ATGGGATTGTTGTGCTTCCACTATCTTGAACCGAGTGAATACAAGACCTAAGTTCCAAGAAGCAGCA
 GTCCACAAACATTCTGGATCTGCTTGAACCTGGAATATCCGGATGGTCACCATCATGTCCATAATGCTG
 TGGATGACCATACAGTGGGCTATTTGGGCTTTCGCTTGATACTCTAAGTGCATGGGACATCTTTG
 TGAATGCTTCTTTAGCGATGGTTGAAGTCCCAGCATATGTGTTGGCCTGGCTGCTGCAATATTT
 GCCCCGGCGCTATTCATGGCCACTGCCCTTCTCTGGGTGGCAGTGTCTTCTTTCATGCAGCTGGTA
 CCCCCAGACTTGTATTATTTGGCTACAGTCTGGTGTGTTGGGCAAGTTTGGAGTCACGGCTGCCTTTT
 CCATGGTCTACGTGTACACAGCCGAGCTGTATCCACAGTGGTGAAGAACATGGGTGTGGGAGTCAGCTC
 CACAGCATCCCGCTGGGACGATCCTGTCTCCCTACTTCGTTTACCTTGGTGCCTACGACCGCTTCTCG
 CCCTACATTCTCATGGGAAGTCTGACCATCCTGACAGCCATCCTCACCTTGTCTCCAGAGAGCTTCG
 GTACCCCACTCCAGACACCATTGACCAGATGCTAAGAGTCAAAGGAATGAAACACAGAAAACTCCAAG
 TCACACAAGGATGTTAAAAGATGGTCAAGAAAGGCCACAATCCTTAAAAGCACAGCCTTC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC204177 protein sequence
 Red=Cloning site Green=Tags(s)

MRDYDEVTAFLGEWPFQRLIFFLLSASIIPNGFTGLSSVFLIATPEHRCRVPDAANLSSAWRNHTVPLR
 LRDGREVPHSCRRYRLATIANFSALGLEPGRDVLGQLEQESCPDGWEFSQDVYLSITIVTEWNLVCEDDW
 KAPLTISLFFVGVLLGSFISGQLSDRFGRKNVLFVTMGMQTGFSFLQIFSKNFEMFVFLVLMGMQISN
 YVAAFVLGTEILGKSVRIIFSTLGVCFYAFGYMVLPLFAYFIRDWRMLLVALTMPGVLCVALWWFIPES
 PRWLISQGRFEEAEVIRKAAKANGIVVPSTIFDPSELQDLSSKKQQSHNILDLLRTWNIRMVTIMSIML
 WMTISVGYFGLSLDTPNLHGDIFVNCFLSAMVEVPAYVLAWLLLQYLPRRYSMATALFLGGSVLLFMQLV
 PPDLYLATVLMVGKFGVTAAFSMVYVYTAELYPTVVRNMGVGSSTASRLGSILSPYFVYLGAYDRFL
 PYILMGLTILTAILTLFLPESFGTLPDIDQMLRVKGMKHKRTPSHRMLKDGQERPTILKSTAF

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6199_e07.zip

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



ACCN: NM_003060

ORF Size: 1671 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_003060.4](#)

RefSeq Size: 3295 bp

RefSeq ORF: 1674 bp

Locus ID: 6584

UniProt ID: [O76082](#)

Cytogenetics: 5q31.1

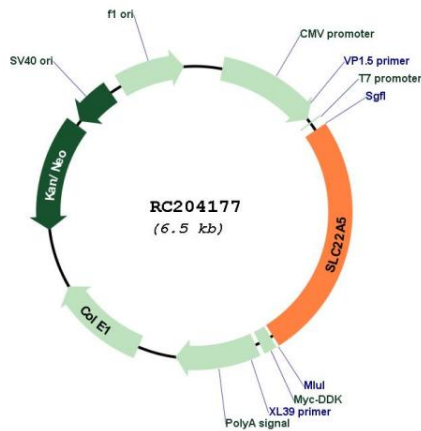
Domains: sugar_tr

Protein Families: Transmembrane

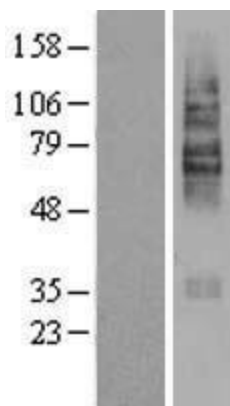
MW: 62.7 kDa

Gene Summary: Polyspecific organic cation transporters in the liver, kidney, intestine, and other organs are critical for elimination of many endogenous small organic cations as well as a wide array of drugs and environmental toxins. The encoded protein is a plasma integral membrane protein which functions both as an organic cation transporter and as a sodium-dependent high affinity carnitine transporter. The encoded protein is involved in the active cellular uptake of carnitine. Mutations in this gene are the cause of systemic primary carnitine deficiency (CDSP), an autosomal recessive disorder manifested early in life by hypoketotic hypoglycemia and acute metabolic decompensation, and later in life by skeletal myopathy or cardiomyopathy. Alternative splicing of this gene results in multiple transcript variants. [provided by RefSeq, Apr 2015]

Product images:



Circular map for RC204177



Western blot validation of overexpression lysate (Cat# [LY401068]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204177 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).