OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for MG206963

Cyp27a1 (BC002183) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Cyp27a1 (BC002183) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Cyp27a1
Synonyms:	1300013A03Rik; Cyp27
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence:

>MG206963 representing BC002183
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTGGACAACCTCCTTTGGGACTTACACCAATGTGAATCTGGCTAGTGCCCCACTCTTGGAGCAAGTGA
TGAGACAGGAGGGCAAGTACCCAATAAGAGACCACATGGATCAGTGGAAGGACCACCGAGACCACAAGGG
CCTCACCTATGGGATCTTCATCGCACAAGGAGAGCAATGGTACCATCTGCGTCAGGCTTTGAAACAGAGG
CTGCTGAAGCCTGACGAGGCCGCGCTCTACACGGATGCCTTAAACGAGGTTATCAGTGACTTTATCACCC
GGCTGGACCAGGTGCGGGCAGAGAGTGAATCAGGGGACCAGGTGCCAGACATGGCTCATCTTCTCTACCA
CCTTGCCTTGGAAGCCATCACCTATATCCTGTTTGAGAAAAGGATTGGCTGCCTGAAACCCTCCATTCCT
GAGGACACTGCCGCCTTCATCAGATCTGTTGCAATCATGTTCCAGAACTCAGTCTATATCACTTTCCTTC
CCAAATGGACGCGTCCTCTGCTGCCCTTTTGGAAGCGATACCTGAATGGCTGGGATAACATTTTCTCCTT
TGGAAAGAAGCTGATTGATGAAAAAGTCCAGGAGCTAAAAGCCCAGCTACAGGAAACTGGGCCAGATGGA
GTCCGGGTATCTGGCTACCTGCACTTCCTGCTGACCAATGAATTGCTCAGTACTCAGGAGACCATCGGCA
CCTTTCCTGAGCTGCTTTTGGCTGGGGTGGACACGACATCCAACACACTGACATGGGCCCTGTACCACCT
TTCAAAGAGCCCAGAGATCCAGGAGGCCTTGCACAAGGAAGTGACTGGTGTGGTGCCCTTCGGGAAGGTG
CCCCAGCACAAGGACTTTGCCCACATGCCTCTGCTAAAAGCTGTGATTAAGGAGACCCTGCGCCTCTACC
CTGTGGTTCCCACAAACTCCCGGATCATCACAGAAAAGGAAACTGAAATTAATGGCTTTCTCTTCCCCAA
GAATACACAGTTTGTGTTATGCCACTACGTGGTGTCCCGGGATCCCAGTGTCTTTCCTGAGCCCAACAGC
TTCCAGCCTCACCGATGGCTGAGGAAGAAAGAGGCTGATAACCCTGGGATCCTACATCCATTCGGCTCTG
TGCCCTTCGGCTATGGGGTTCGGTCTTGCCTGGGTCGGAGGATTGCAGAACTGGAGATGCAACTGATGCT
GTCAAGGCTGGTACAGAAGTATGAGATTGCCCTGGCTCCCGGGATGGGAGAAGTAAAGACTGTGTCCCGC
ATCGTCCTGGTTCCCAGCAAGAAGGTGAGGCTGCATTTTCTGCAGAGACAG

AGCGGACCGACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

View online »

Protein Sequence:

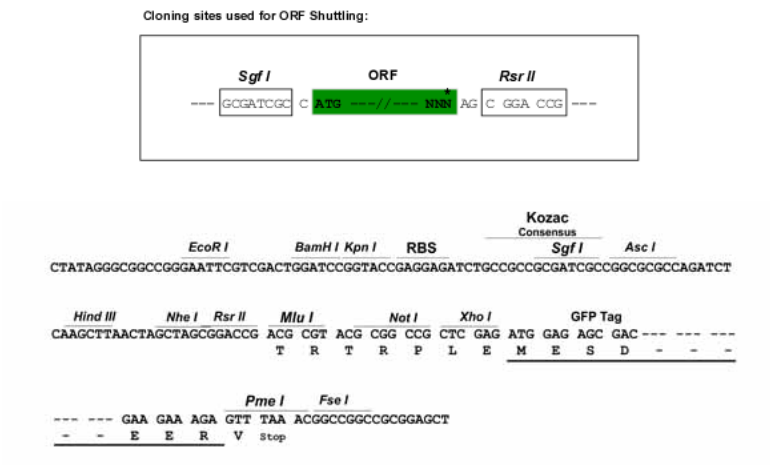
>MG206963 representing BC002183
Red=Cloning site Green=Tags(s)

MWTTSFGTYTNVNLASAPLLEQVMRQEGKYPIRDHMDQWKDHRDHKGLTYGIFIAQGEQWYHLRQALKQR
LLKPDEAALYTDALNEVISDFITRLDQVRAESESGDQVPDMAHLLYHLALEAITYILFEKRIGCLKPSIP
EDTAAFIRSVAIMFQNSVYITFLPKWTRPLLPFWKRYLNGWDNIFSFGKKLIDEKVQELKAQLQETGPDG
VRVSGYLHFLLTNELLSTQETIGTFPELLLAGVDTTSNTLTWALYHLSKSPEIQEALHKEVTGVVPFGKV
PQHKDFAHMPLLKAVIKETLRLYPVVPTNSRIITEKETEINGFLFPKNTQFVLCHYVVSRDPSVFPEPNS
FQPHRWLRKKEADNPGILHPFGSVPFGYGVRSCLGRRIAELEMQLMLSRLVQKYEIALAPGMGEVKTVSR
IVLVPSKKVRLHFLQRQ

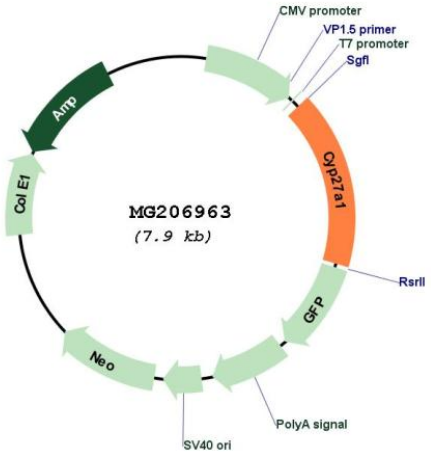
SGPTRTRRLE – GFP Tag – V

Restriction Sites: SgfI-RsrII

Cloning Scheme:



Plasmid Map:



ACCN: BC002183

ORF Size:	1313 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:	BC002183, AAH02183
RefSeq Size:	1579 bp
RefSeq ORF:	1313 bp
Locus ID:	104086
Cytogenetics:	1 38.54 cM
Gene Summary:	Cytochrome P450 monooxygenase that catalyzes regio- and stereospecific hydroxylation of cholesterol and its derivatives. Hydroxylates (with R stereochemistry) the terminal methyl group of cholesterol side-chain in a three step reaction to yield at first a C26 alcohol, then a C26 aldehyde and finally a C26 acid. Regulates cholesterol homeostasis by catalyzing the conversion of excess cholesterol to bile acids via both the "neutral" (classic) and the "acid" (alternative) pathways. May also regulate cholesterol homeostasis via generation of active oxysterols, which act as ligands for NR1H2 and NR1H3 nuclear receptors, modulating the transcription of genes involved in lipid metabolism (By similarity). Plays a role in cholestanol metabolism in the cerebellum (PubMed:28190002). Similarly to cholesterol, hydroxylates cholestanol and may facilitate sterol diffusion through the blood-brain barrier to the systemic circulation for further degradation. Also hydroxylates retinal 7-ketocholesterol, a noxious oxysterol with pro-inflammatory and pro-apoptotic effects, and may play a role in its elimination from the retinal pigment epithelium. May play a redundant role in vitamin D biosynthesis. Catalyzes 25-hydroxylation of vitamin D3 that is required for its conversion to a functionally active form (By similarity).[UniProtKB/Swiss-Prot Function]