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Product datasheet for RC210359

Serine racemase (SRR) (NM_021947) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Serine racemase (SRR) (NM_021947) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Serine racemase
Synonyms:	ILV1; ISO1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC210359 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s) TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCC ATGTGTGCTCAGTATTGCATCTCCTTTGCTGATGTTGAAAAAGCTCATATCAACATTCGAGATTCTATCC ACCTCACACCAGTGCTAACAAGCTCCATTTTGAATCAACTAACAGGGCGCAATCTTTTCTTCAAATGTGA ACTCTTCCAGAAAACAGGATCTTTTAAGATTCGTGGTGCTCTCAATGCCGTCAGAAGCTTGGTTCCTGAT GCTTTAGAAAGGAAGCCGAAAGCTGTTGTTACTCACAGCAGTGGAAACCATGGCCAGGCTCTCACCTATG CTGCCAAATTGGAAGGAATTCCTGCTTATATTGTGGTGCCCCAGACAGCTCCAGACTGTAAAAAACTTGC AATACAAGCCTACGGAGCGTCAATTGTATACTGTGAACCTAGTGATGAGTCCAGAGAAAATGTTGCAAAA AGAGTTACAGAAGAAACAGAAGGCATCATGGTACATCCCAACCAGGAGCCTGCAGTGATAGCTGGACAAG GGACAATTGCCCTGGAAGTGCTGAACCAGGTTCCTTTGGTGGATGCACTGGTGGTACCTGTAGGTGGAGG AGGAATGCTTGCTGGAATAGCAATTACAGTTAAGGCTCTGAAACCTAGTGTGAAGGTATATGCTGCTGAA CCCTCAAATGCAGATGACTGCTACCAGTCCAAGCTGAAGGGGAAACTGATGCCCAATCTTTATCCTCCAG AAACCATAGCAGATGGTGTCAAATCCAGCATTGGCTTGAACACCTGGCCTATTATCAGGGACCTTGTGGA TGATATCTTCACTGTCACAGAGGATGAAATTAAGTGTGCAACCCAGCTGGTGTGGGAGAGGATGAAACTA CTCATTGAACCTACAGCTGGTGTTGGAGTGGCTGCTGTGCTGTCTCAACATTTTCAAACTGTTTCCCCAG AAGTAAAGAACATTTGTATTGTGCTCAGTGGTGGAAATGTAGACTTAACCTCCTCCATAACTTGGGTGAA GCAGGCTGAAAGGCCAGCTTCTTATCAGTCTGTTTCTGTT ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

>RC210359 protein sequence
Red=Cloning site Green=Tags(s)

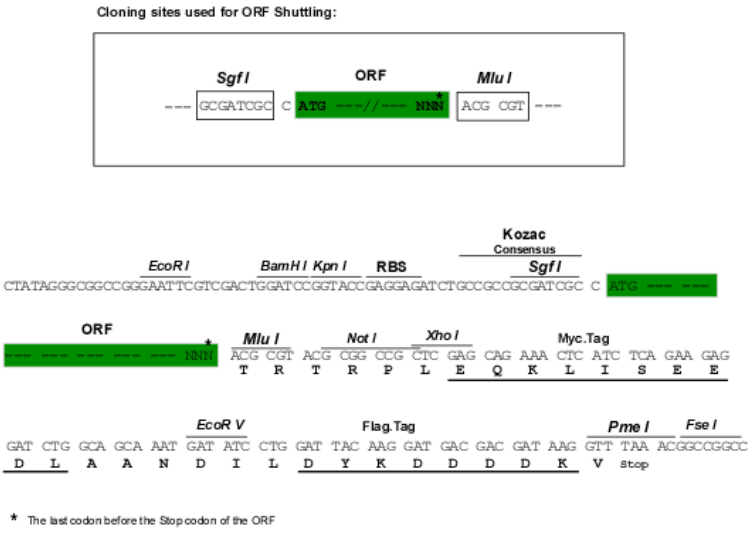
MCAQYCISFADVEKAHINIRDSIHLTPVLTSSILNQLTGRNLFFKCELFQKTGSFKIRGALNAVRSLVPD
ALERKPKAVVTHSSGNHGQALTYAAKLEGIPAYIVVPQTAPDCKKLAIQAYGASIVYCEPSDESRENVAK
RVTEETEGIMVHPNQEPAVIAGQGTIALEVLNQVPLVDALVVPVGGGGMLAGIAITVKALKPSVKVYAAE
PSNADDCYQSKLKGKLMPNLYPPETIADGVKSSIGLNTWPIIRDLVDDIFTVTEDEIKCATQLVWERMKL
LIEPTAGVGVAAVLSQHFQTVSPEVKNICIVLSGGNVDLTSSITWVKQAERPASYQSVSV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6006_a08.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_021947

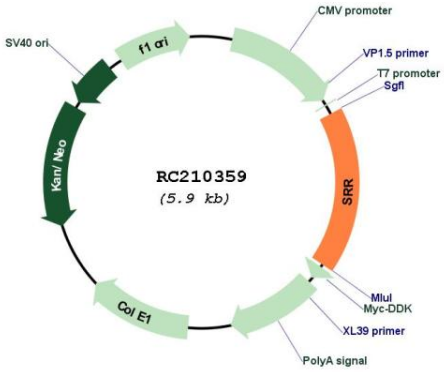
ORF Size: 1020 bp

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.

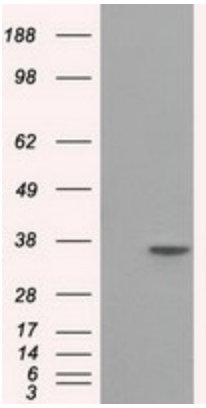
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in 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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_021947.3
RefSeq Size:	2477 bp
RefSeq ORF:	1023 bp
Locus ID:	63826
UniProt ID:	Q9GZT4
Cytogenetics:	17p13.3
Domains:	PALP
Protein Pathways:	Glycine, serine and threonine metabolism
MW:	36.6 kDa
Gene Summary:	Catalyzes the synthesis of D-serine from L-serine. D-serine is a key coagonist with glutamate at NMDA receptors. Has dehydratase activity towards both L-serine and D-serine. [UniProtKB/Swiss-Prot Function]

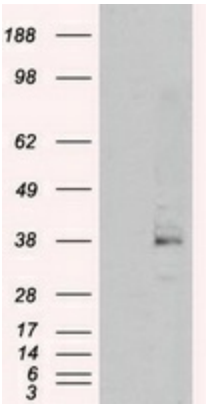
Product images:



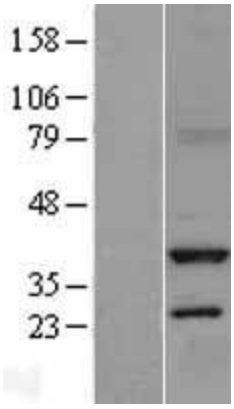
Circular map for RC210359



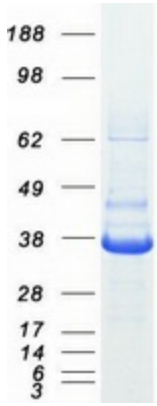
HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY SRR (Cat# RC210359, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-SRR antibody (Cat# [TA500940]). Positive lysates [LY402897] (100ug) and [LC402897] (20ug) can be purchased separately from OriGene.



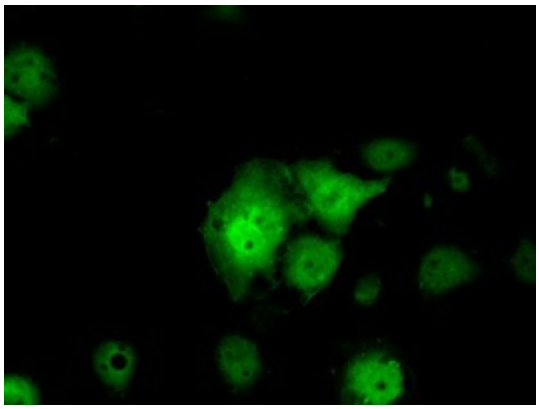
HEK293T cells were transfected with the pCMV6-ENTRY control (Left lane) or pCMV6-ENTRY SRR (RC210359, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-SRR ([TA500949]). Positive lysates [LY402897] (100ug) and [LC402897] (20ug) can be purchased separately from OriGene.



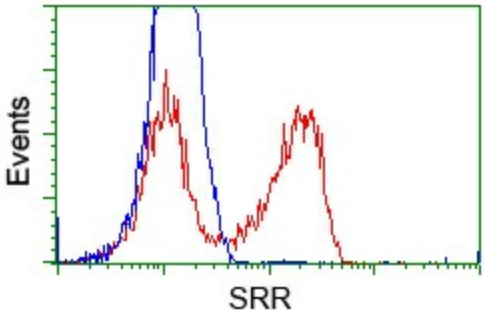
Western blot validation of overexpression lysate (Cat# [LY402897]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210359 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified SRR protein (Cat# [TP310359]). The protein was produced from HEK293T cells transfected with SRR cDNA clone (Cat# RC210359) using MegaTran 2.0 (Cat# [TT210002]).



Anti-SRR mouse monoclonal antibody ([TA500949]) immunofluorescent staining of COS7 cells transiently transfected by pCMV6-ENTRY SRR (RC210359).



HEK293T cells transfected with either pCMV6-ENTRY SRR (RC210359) (Red) or empty vector control plasmid (Blue) were immunostained with anti-SRR mouse monoclonal ([TA500949]), and then analyzed by flow cytometry.