

## 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:	SRR
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)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTGTGCTCAGTATTGCATCTCCTTTGCTGATGTTGAAAAAGCTCATATCAACATTCGAGATTCTATCC  
ACCTCACACCAGTGCTAACAAGCTCCATTTTGAATCAACTAACAGGGCGCAATCTTTTCTCAAATGTGA  
ACTCTCCAGAAAACAGGATCTTTAAGATTCTGGTGTCTCAATGCCGTCAGAAGCTTGGTTCCTGAT  
GCTTTAGAAAAGGAAGCCGAAAGCTGTTGTTACTCACAGCAGTGGAAACCATGGCCAGGCTCTCACCTATG  
CTGCCAAATTGGAAGGAATTCCTGCTTATATTGGTGGCCAGACAGCTCCAGACTGTAAAAAAGTTGC  
AATACAAGCCTACGGAGCGTCAATTGTATACTGTGAACCTAGTGATGAGTCCAGAGAAAAAGTTGCAAAA  
AGAGTTACAGAAGAAACAGAAGGCATCATGGTACATCCCAACCAGGAGCCTGCAGTGATAGCTGGACAAG  
GGACAATTGCCCTGGAAGTGCTGAACAGGTTCCCTTTGGTGGATGCACTGGTGGTACCTGTAGGTGGAGG  
AGGAATGCTTGTGGAATAGCAATTACAGTTAAGGCTCTGAAACCTAGTGTGAAGGTATATGCTGCTGAA  
CCCTCAAATGCAGATGACTGCTACCAGTCCAAGCTGAAGGGGAAACTGATGCCCAATCTTTATCCTCCAG  
AAACCATAGCAGATGGTGTCAAATCCAGCATTGGCTTGAACACCTGGCCTATTATCAGGGACCTTGTGGA  
TGATATCTTCACTGTACAGAGGATGAAATTAAGTGTGCAACCCAGCTGGTGTGGGAGAGGATGAAACTA  
CTCATTGAACCTACAGCTGGTGTGGAGTGGCTGCTGTCTCAACATTTTCAAAGTGTTCCTCCAG  
AAGTAAAGAACATTTGTATTGTGCTCAGTGGTGGAAATGTAGACTTAACCTCCTCATAAAGTGGGTGAA  
GCAGGCTGAAAGGCCAGCTTCTTATCAGTCTGTTTCTGTT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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

MCAQYCISFADVEKAHINIRDSIHLTPVLTSSILNQLTGRNLFFKCELFQKTGSFKIRGALNAVRS LVPD  
 ALERKPKAVVTHSSGNHGQALTYAAKLEGIPAYIVVPQTAPDCKKLAIQAYGASIVYCEPSDESRENVAK  
 RVTEETEGIMVHPNQEP AVIAGQGTIALEVLNQVPLVDALVVPVGGGMLAGIAITVKALKPSVKVYAAE  
 PSNADDCYQSKLKGKLMPNLYPPE TIADGVKSSIGLNTWPIIRD LVDDIF TVTEDEIKCATQLVWERMKL  
 LIEPTAGVGVAAVLSQHFQTVSPEVKNICIVLSGGNVDLTSSITWVKQAERPASYQSVSV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

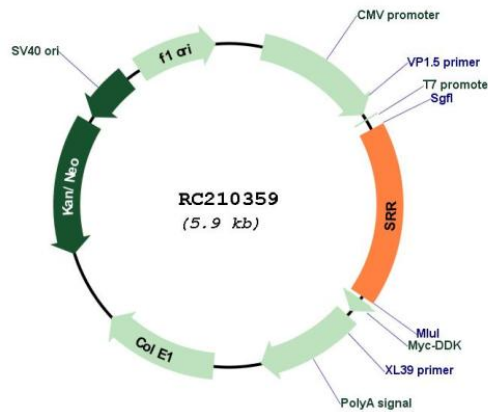
Chromatograms: [https://cdn.origene.com/chromatograms/mk6006\\_a08.zip](https://cdn.origene.com/chromatograms/mk6006_a08.zip)

Restriction Sites: SgfI-MluI

Cloning Scheme:

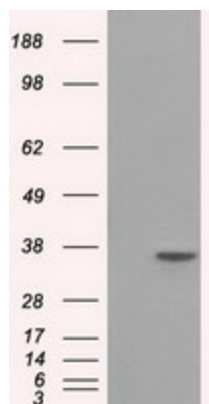


Plasmid Map:

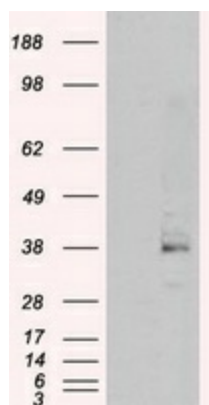


ACCN: NM\_021947

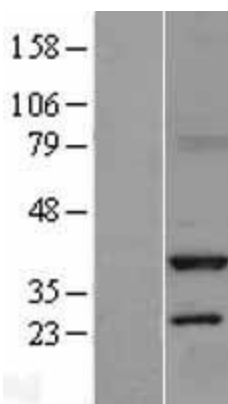
<b>ORF Size:</b>	1020 bp
<b>OTI Disclaimer:</b>	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid 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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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. <a href="#">More info</a></p>
<b>OTI Annotation:</b>	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>	<a href="#">NM_021947.3</a>
<b>RefSeq Size:</b>	2477 bp
<b>RefSeq ORF:</b>	1023 bp
<b>Locus ID:</b>	63826
<b>UniProt ID:</b>	<a href="#">Q9GZT4</a>
<b>Cytogenetics:</b>	17p13.3
<b>Domains:</b>	PALP
<b>Protein Pathways:</b>	Glycine, serine and threonine metabolism
<b>MW:</b>	36.6 kDa
<b>Gene Summary:</b>	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:**


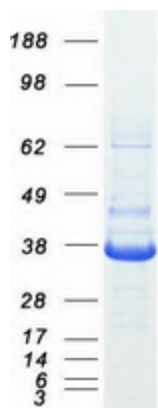
HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY SRR (Cat# RC210359, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-SRR antibody (Cat# [TA500940]).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



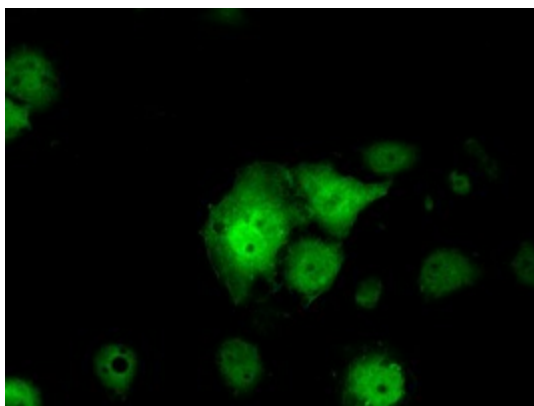
HEK293T cells were transfected with the pCMV6-ENTRY control (Left lane) or pCMV6-ENTRY SRR (RC210359, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-SRR ([TA500949]). Positive lysates [LY402897] (100ug)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



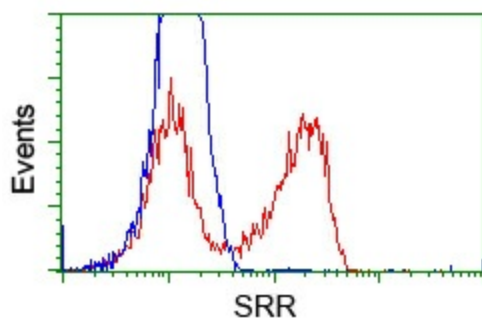
Western blot validation of overexpression lysate (Cat# [LY402897]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210359 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



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.