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Product datasheet for RC205679

SPR (NM_003124) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SPR (NM_003124) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SPR
Synonyms:	SDR38C1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC205679 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGAGGGCGGGCTGGGGCGTGCTGTGTGCTTGCTGACCGGGGCCTCCCGCGGCTTCGGCCGGACGCTGG
CCCCGCTCCTGGCCTCGCTGCTGTCGCCCGGCTCCGTGCTTGTCCTTAGCGCCCGCAACGACGAGGCACT
GCGCCAGCTGGAGGCCGAGCTGGGCGCCGAGCGGTCTGGCCTGCGCGTGGTGCGGGTGCCCGCCGACCTG
GGCGCCGAGGCCGGCTTGCAGCAGCTGCTCGGCGCCCTGCGCGAGCTCCCCCGGCCCAAGGGGCTGCAGC
GACTGCTGCTTATCAACAACGCGGGCTCTCTTGGGGATGTGTCCAAAGGCTTCGTGGACCTGAGTGACTC
CACTCAAGTGAACAACTACTGGGCACTGAACTTGACCTCCATGCTCTGCCTGACTTCCAGCGTCCTGAAG
GCCTTCCCGGACAGTCCTGGCCTCAACAGAACCGTGGTTAACATCTCGTCCCTCTGTGCCCTGCAACCTT
TCAAAGGCTGGGCGCTGTACTGTGCAGGAAAGGCTGCTCGTGATATGCTGTTCCAGGTCCTGGCGCTGGA
GGAACCTAATGTGAGGGTGCTGAACTATGCCCCAGGTCCTCTGGACACAGACATGCAGCAGTTGGCCCGG
GAGACCTCCGTGGACCCAGACATGCGAAAAGGGCTGCAGGAGCTGAAGGCAAAGGGGAAGCTGGTGGATT
GCAAGGTGTCAGCCCAGAAACTGCTGAGCTTACTGGAAAAGGACGAGTTCAAGTCTGGAGCCCACGTGGA
CTTCTATGACAAA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

>RC205679 protein sequence
Red=Cloning site Green=Tags(s)

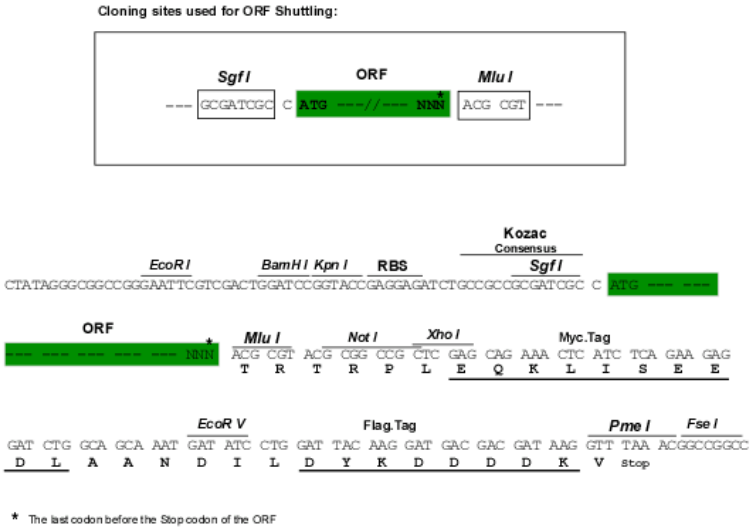
MEGGLGRAVCLLTGASRGFGRTLAPLLASLLSPGSVLVLSARNDEALRQLEAELGAERSGLRVVRVPADL
GAEAGLQQLLGALRELPRPKGLQRLLLINNAGSLGDVSKGFVDLSDSTQVNNYWALNLTSMLCLTSSVLK
AFPDSPGLNRTVVNISSLCALQPFKGWALYCAGKAARDMLFQVLALEEPNVRVLNYAPGPLDTDMQQLAR
ETSVDPDMRKGLQELKAKGKLVDCKVSAQKLLSLLEKDEFKSGAHVDFYDK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6194_b01.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_003124

ORF Size: 783 bp

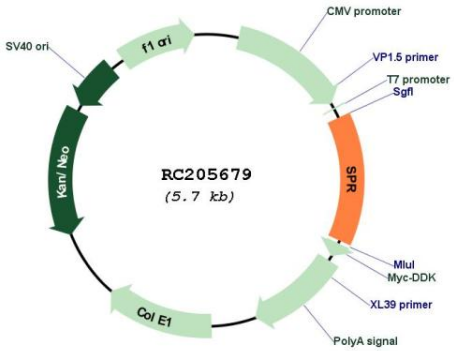
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

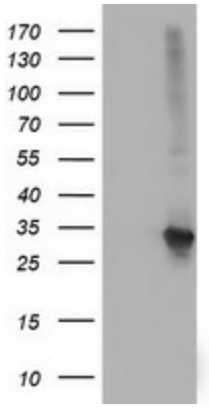
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_003124.5
RefSeq Size:	1466 bp
RefSeq ORF:	786 bp
Locus ID:	6697
UniProt ID:	P35270
Cytogenetics:	2p13.2
Domains:	adh_short
Protein Families:	Druggable Genome
Protein Pathways:	Folate biosynthesis, Metabolic pathways
MW:	28 kDa
Gene Summary:	This gene encodes an aldo-keto reductase that catalyzes the NADPH-dependent reduction of pteridine derivatives and is important in the biosynthesis of tetrahydrobiopterin (BH4). Mutations in this gene result in DOPA-responsive dystonia due to sepiaterin reductase deficiency. A pseudogene has been identified on chromosome 1. [provided by RefSeq, Jul 2008]

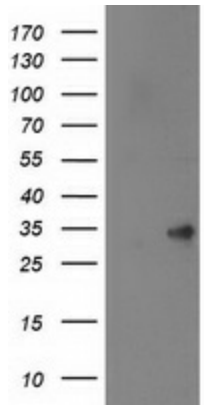
Product images:



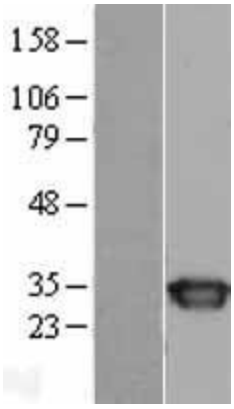
Circular map for RC205679



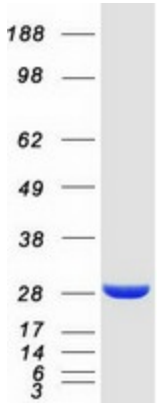
HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY SPR (Cat# RC205679, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-SPR antibody (Cat# [TA501963]). Positive lysates [LY401086] (100ug) and [LC401086] (20ug) can be purchased separately from OriGene.



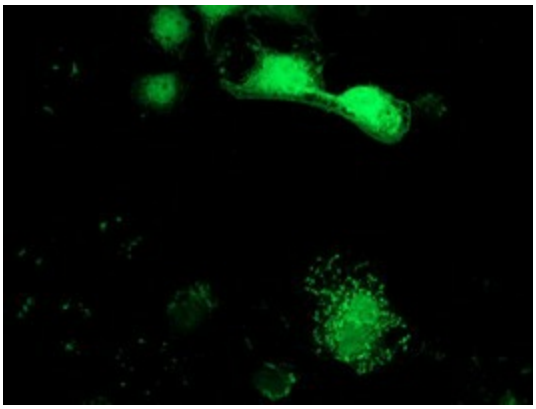
HEK293T cells were transfected with the pCMV6-ENTRY control (Left lane) or pCMV6-ENTRY SPR (RC205679, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-SPR ([TA501983]). Positive lysates [LY401086] (100ug) and [LC401086] (20ug) can be purchased separately from OriGene.



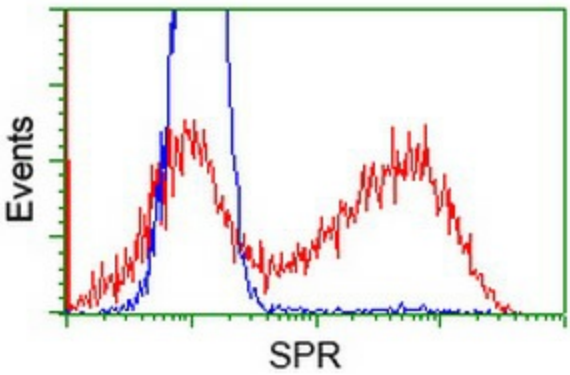
Western blot validation of overexpression lysate (Cat# [LY401086]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC205679 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified SPR protein (Cat# [TP305679]). The protein was produced from HEK293T cells transfected with SPR cDNA clone (Cat# RC205679) using MegaTran 2.0 (Cat# [TT210002]).



Anti-SPR mouse monoclonal antibody ([TA501983]) immunofluorescent staining of COS7 cells transiently transfected by pCMV6-ENTRY SPR (RC205679).



HEK293T cells transfected with either RC205679 overexpress plasmid (Red) or empty vector control plasmid (Blue) were immunostained by anti-SPR antibody ([TA501983]), and then analyzed by flow cytometry.