

## Product datasheet for RC214306

### Spt6 (SUPT6H) (NM\_003170) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Spt6 (SUPT6H) (NM_003170) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Spt6
Synonyms:	emb-5; SPT6; SPT6H
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC214306 representing NM_003170 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTCTGATTTTGTGAAAGCGAGGCTGAGGAGTCAGAGGAAGAATACAATGATGAAGGCGAGGTGGTAC  
CCCGAGTCACCAAGAAATTTGTGGAAGAGGAGGATGATGATGAGGAGGAGGAGGAGGAGAACCTAGATGA  
TCAGGATGAGCAAGGCAACTTGAAGGCTTTATCAATGACGATGATGATGAAGATGAAGGGGAGGAGGAT  
GAGGGCAGTGACTCTGGTATTGAGAAGATGATGTTGGCCACAAGAAGAGAAAACGCACCTCTTTTGATG  
ACCGCCTGGAGGATGATGATTTTGACCTCATTGAGGAGAAATTTGGGTGTCAAAGTCAAAGAGGACAAAA  
GTACCGCGGTGTCAAAAAATGTGAGATGACGAGGACGATGACGAGGAGGAATATGGCAAGGAGGAACAT  
GAAAAAGAAGCTATTGCGGAAGAAATCTCCAGGATGGGGAAGGGGAAGAAGGGCAGGAGGCCATGGAGG  
CCCCATGGCTCCTCCAGAGGAGGAGGAAGAAGATGATGAGGAGTCAGATATTGACGACTTCATTGTGGA  
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GACCACCAAGAAGCGTGTGAGCCGTAGGAGCATCTTTGAAATGTATGAGCCAGTGAGCTAGAAAAGCAGC  
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CGTGTCAGGGAAGAGGGAGATGAAGAAGGTGAAGGTGACGAGGCAGAAGATGAGGAGCAGAGGGGGCCTG  
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 GCCAACCTTCCAAGAGAGAGCCAAGTAAATATAACCCCCACCAAGAAAGGTAGAAGGATGTGGATGAG  
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 CGAGTTGGCCATTCTCTATATGAACAGCAAGAAGTCAAGGACAGAGTTCCGGGATTATCCTCCAGTGCTG  
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 AAGTTCTACTGGGATACCAGCCCGGGGTAACCCAGGATAGAATATGTAACGGTACTCCAGAGGGAT  
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 TCCTGTACCAGGCATCACCCCTAGCAGCAGCAGGACCCGGACACCTGCCTCTATCAATGCTACCCCA  
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 TGGCTGCAGGAAAAGGAGGCAGAACGGCGGAAACAGAAGCAGCGGCTGACACCTCGGCCCTCCCCAGCC

CCATGATCGAAAGCACCCCCATGTCCATTGCTGGCGATGCCACCCCACTCCTGGACGAGATGGATCGG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC214306 representing NM\_003170  
Red=Cloning site Green=Tags(s)

MSDFVESEAESEEEYNDGEVVPRTKKFVEEEDDDEEEEEENLDDQDEQGNLKGFINDDDEDEGEED  
EGSDSGSEDDVGHKKRRTSFDDRLLEDDFDLIEENLGVKVRGQKYRRVKKMSDDEDDDEEYKKEE  
EKEAIAEEIFQDGEEGEQEAMEAPMAPPEEEEEDESDIDDFIVDDDGQPLKPKWRKKLPGYDAAL  
QEAQEIFGVDFDYDEFEKYNEYDEELEEEYEDDEAEGERVVRPKTTKKRVSRRSIFEMYPESELESS  
HLTDQDNEIRATDLPERFQLRSIPVKGAEDELEEEADWIYRNAFATPTISLQESCDYLDRGQPASSFSR  
KGPSTIQIKIEALGFMRNQHFVPIAFYRKEYVEPELHINDLWRVWQWDEKWTQLRIRKENLTRLFEKM  
QAYQYEQISADPKPLADGIRALDITDIMERLKDVSMDLKDVTYVNHFLLYGRDIPKMQNAAKASRKKL  
RVREEGDEEGDEAEDEEQRGPELQASRRDMYITCQSAGLDGLAKKFGLTPEQFGENLRDSYQRHETE  
QFPAEPLKADYVCSQFPTPEAVLEGARYMVALQIAREPLVRQVLRQTFQERAKLNITPTTKGRKDVE  
AHYAYSFKYLKPKVRELDDQFLKICLAEDEGLLTTDISIDLKGVGYGNDQTYFEEIKQFYRDEFSSH  
QVQEWNRQRTMAIERALQQFLYVQMAKELKNLLAEAKEYVIKACSRKLYNWLRVAPYRPDQVVEEDDDF  
MDENQGGKIRVLGIAFSSARDHPVFCALVNGEGETDFLRLPHFTKRRTAWREEEREKKAQDIETLKKFL  
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RQAVSLARRIQDPLIEFAQVCSDEEDILCLKFHPLQEHVVKEELLNALLYCEFINRVNEVGVNRAIAHP  
YSQALIQYVCGLGPRKGTLLKILKQNNRLESRTQLVTMCHMGPKVFMNCAGFLKIDTASLGDSTDSYI  
EVL DGSRVHPETYEWARDMAVDALEYDESAEDANPAGALEEILENPERLKDLDLDAFAEELERQGYGDKH  
ITLYDIRAELSCRYKDLRTAYRSPNTEEIFNMLTKETPETFYIGKLIICNVTGIAHRRPQGESYDQAIRN  
DETLGWQCPFCQDNFPELSEVWNHFDGSCPGQAIGVKTRLNNGVTGFIPTKFLSDKVVKRPEERVKVG  
MTVHCRIMKIDIEKFSADLTCRTSDLMDRNNEWKLPKDTYYDFDAEAADHKQEEDMKRQRTTYIKRVI  
AHPFSFHNFQAEKMMETMDQGDVIRPSSKGENHLTVTWKVSQGIYQHVVDVREEGKENAFSLGATLWI  
NSEEFEDLDEIVARYVQPMASFARDLLNHKYYQDCSGGDRKKLEELLIKTKKEKPTFIPYFICACKELPG  
KFLLYGQPRGKPRIEYVTVTPEGFRYRGQIFPTVNGLFRWFKDHYQDPVPGITPSSSRTRTPASINATP  
ANINLADLTRAVNALPQNMTSQMFSIAIAAVTGQGQNPATPAQWASSQYGYGGSGGSSAYHVFPPTAQQ  
PVATPLMTPSYSYTTSPQITTPQYHQLQASTTPQSAQAQPSSSSSRQRQQPKSNSHAAIDWGKMAEQ  
WLQEKEAERRKQKQRLTPRPSPIESTPMSIAGDATPLLEDMDR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk8103\\_h02.zip](https://cdn.origene.com/chromatograms/mk8103_h02.zip)

**Restriction Sites:**

SgfI-MluI

Cloning Scheme:



ACCN: NM\_003170

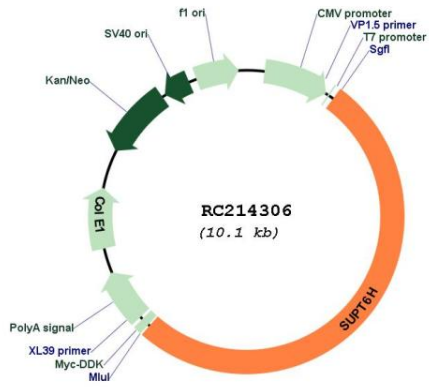
ORF Size: 5178 bp

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](mailto: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](#)

<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_003170.5</a>
<b>RefSeq Size:</b>	5896 bp
<b>RefSeq ORF:</b>	5181 bp
<b>Locus ID:</b>	6830
<b>UniProt ID:</b>	<a href="#">Q7KZ85</a>
<b>Cytogenetics:</b>	17q11.2
<b>Domains:</b>	SH2, S1, YqgFc
<b>Protein Families:</b>	Transcription Factors
<b>MW:</b>	199.07 kDa
<b>Gene Summary:</b>	<p>Transcription elongation factor which binds histone H3 and plays a key role in the regulation of transcription elongation and mRNA processing. Enhances the transcription elongation by RNA polymerase II (RNAPII) and is also required for the efficient activation of transcriptional elongation by the HIV-1 nuclear transcriptional activator, Tat. Besides chaperoning histones in transcription, acts to transport and splice mRNA by forming a complex with IWS1 and the C-terminal domain (CTD) of the RNAPII subunit RPB1 (POLR2A). The SUPT6H:IWS1:CTD complex recruits mRNA export factors (ALYREF/THOC4, EXOSC10) as well as histone modifying enzymes (such as SETD2), to ensure proper mRNA splicing, efficient mRNA export and elongation-coupled H3K36 methylation, a signature chromatin mark of active transcription. SUPT6H via its association with SETD1A, regulates both class-switch recombination and somatic hypermutation through formation of H3K4me3 epigenetic marks on activation-induced cytidine deaminase (AICDA) target loci. Promotes the activation of the myogenic gene program by entailing erasure of the repressive H3K27me3 epigenetic mark through stabilization of the chromatin interaction of the H3K27 demethylase KDM6A.</p> <p>[UniProtKB/Swiss-Prot Function]</p>

Product images:



Circular map for RC214306