

## Product datasheet for **RG226318**

### SUPT5H (NM\_001130825) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	SUPT5H (NM_001130825) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	SUPT5H
Synonyms:	SPT5; SPT5H; Tat-CT1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG226318 representing NM_001130825 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTCGGACAGCGAGGACAGCAACTTTCCGAGGAGGAGGACAGCGAGCGCAGCAGTGACGGCGAGGAGG  
CCGAGGTAGACGAAGAGCGGGGAGTGCAGCGGGCAGTGAGAAAGAAGAAGAGCCTGAGGACGAAGAGGA  
GGAGGAAGAGGAGGAGGAATACGATGAGGAAGAGGAGGAAGAAGATGATGACCGACCCCAAGAAACCC  
CGCCATGGAGGCTTCATTCTGGACGAGGCTGATGTTGACGATGAGTATGAGGACGAGGACCAGTGGGAGG  
ATGGAGCAGAGGACATTCTAGAGAAAGCCTCCAATATCGATAATGTTGTCCTGGATGAAGATCGTCTCTGG  
GGCTCGCCGCTGCAAAACCTCTGGAGGGACCAGCGAGAAGAAGAACTGGGCGAGTATTACATGAAGAAA  
TACGCCAAGTCATCTGTGGGAGAGACGGTGTATGGAGGATCTGATGAGCTCTCAGACGACATCACCCAGC  
AGCAGTGCTCCCAGGAGTCAAGGATCCCAATCTGTGGACTGTCAAATGTAAGATTGGGGAGGAACGGGC  
CACGGCCATTTCTTGATGCGCAAGTTCATTGCCTACCAGTTCACAGACACGCCCTGCAGATCAAGTCA  
GTAGTGGCACCAGAGCATGTGAAGGGCTACATCTACGTGGAGGCCACAAGCAGACCCACGTGAAGCAGG  
CCATTGAGGGGTGGGCAACCTGCGGCTGGCTACTGGAACCAGCAGATGGTGCCATCAAGGAGATGAC  
AGACGTGCTCAAAGTGGTGAAGGAGGTGGCCAACCTGAAACCAAAGTCTGGGTCCGCCTCAAGCGGGGC  
ATCTCAAAGGATGACATTGCTCAGGTGGACTACGTGGAGCCAGCAGAACACCATCTCCCTGAAGATGA  
TCCCACGCATCGACTACGATCGCATCAAGGCCCGCATGAGCTTGAAGACTGGTTTGCCAAAAGGAAGAA  
GTTTAAGCGGCCCTCCACAGAGGCTGTTTGATGCTGAGAAGATCAGGTCCCTGGGGGTGATGTTGCCTCT  
GATGGTGACTTCTCATCTTTGAGGGGAACCGTTACAGCCGGAAGGGCTTTCTGTTCAAGAGCTTCGCCA  
TGTCTGCTGTGATCACGGAGGGTGTGAAGCCAACACTCTCTGAGCTGGAAAAGTTTGAGGACCAGCCAGA  
GGGCATTGACCTGGAGGTGGTACTGAGAGCACAGGGAAGGAGCGGGAGCACAACCTTCCAACCTGGGGAC  
AACGTGGAGGTCTGTGAGGGTGAAGTCAACCTGCAGGGCAAGATCCTCAGCGTGGATGGCAACAAGA  
TCACCATCATGCCAAGCATGAGGACCTCAAGGACATGTTGGAGTCCCAGCCCAGGAACCTAGAAAATA  
CTTCAAGATGGGGACCAGTGAAGGTGATTGCTGGCCGATTCGAGGGCGACACAGGCCTCATTGTCCGG



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GTGGAGGAGAATTCGTTATCCTGTTCTCTGACCTCACCATGCATGAGCTGAAGGTGCTCCCCGGGACC  
 TGCAGCTCTGCTCAGAGACAGCATCAGGTGTGGATGTTGGGGCCAGCATGAATGGGGCAGCTGGTGCA  
 GCTGGATCCCCAGACTGTGGGTGCATCGTGGGACTAGAACGGGAGACCTTCCAGGTGCTGAACATGTAC  
 GGGAAAGTGGTACTGTCAGACATCAGGCTGTGACCCGGAAGAAGGACAACCGCTTTGCTGTGGCCTTGG  
 ACTCAGAGCAGAACAATCCATGTGAAAGACATCGTTAAGGTCATTGATGGCCCCACTCAGGCCGAGA  
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 TGGCGGCTTTGGTAGCCAGGTGGCGGAGTGGTGGCATGAGCAGGGGCCGGGGCCGAGGGACAACGAA  
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 CACAGGTCAACCCACAATAACAACCCGACAGCCAGGGACGCGGCCATGTACAACACAGACCAGTTCTC  
 TCCTATGCTGCCCCCTCCCACAAGGTTCTACCAGCCAGCCCGAGCCCGAGAGCTACCACCAGGTG  
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 CCTATCAGGCTAGCCCCAGCCGAGCCCGTGGCTACAGTCTATGACACCTGGAGTCCCTCCCTGG  
 TGGCTACAACCCACACAGCCAGGCTCAGGCATCGAGCAGAACTCCAGCGACTGGTAACCACTGACATT  
 CAGGTGAAGGTGCGGGACACCTACCTGGATACACAGGTGGTGGGACAGACAGGTGTCATCCGAGTCA  
 CGGGGGCATGTGCTCTGTGTAAGGACAGTGAAGGTTGTCAGCATTTCAGTGAGCAGTGA  
 GCCTATACCCCCACCAAGAACAACAAGGTGAAAGTATCCTGGGCGAGGATCGGAAGCCACGGGCGTC  
 CTAAGTATGAGCATTGATGGTGGAGTGGCATTGTCCGATGGACCTGATGAGCAGCTCAAGATCCTCAACC  
 TCCGCTTCTGGGAAGCTCCTGGAAGCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG226318 representing NM\_001130825  
 Red=Cloning site Green=Tags(s)

MSDSESNFSEEDSERSSDGEAEVDEERRSAAGSEKEEEEEPEDEEEEEEEYDEEEEEEDDRPPKPK  
 RHGGFILDADVDEYEDEDQWEDGAEDILEKASNIDNVLDEDRSGARRLQNLWRDQREELGEYYMKK  
 YAKSSVGETVYGGSDDELSDITQQQLLPVKDPNLWTVKCKIGEERATAISLMRKFIAFYQFTDPLQIKS  
 VVAPEHVKGYYIYVEAYKQTHVKQAIIEGVGNLRLGYWNQMVPIKEMTDVVKVVEVANLKPWSVRLKRG  
 IYKDDIAQVDYVEPSQNTISLKMIPRIDYDRIKARMSLKDWF AKRKKFKRPPQRLFDAEKIRSLGGDVAS  
 DGDFLIFEGNRYSRKGLFKSFAMSAVITEGVKPTLSELEKFEDQPEGIDLEVVTSTGKEREHNFQPGD  
 NVEVCEGELINLQGKILSVDGNKITIMPKHEDLKDMLFPAQELRKYFKMGDVKVIAGRFEGDGLIVR  
 VEENFVILFSDLTMHELKVLPRDLQLCSETASGVVGGQHEWVGLVQLDPQTVGVIVRLERETFVQLNMY  
 GKVVTVRHLVAVTRKKNRFAVALDSEQNNIHVKDVKVVDGPHSGREGEIRHLFRSFAFLHCKKLVENGG  
 MFVCKTRHLVLAGGSKPRDVTNFVGGFAPMSPRISPMHPSAGGQRRGGFSPGGGSGMSRGRRRDNE  
 LIGQTVRISQGPYKGYIGVVKDATESTARVELHSTCQTSVDRQLTTVGSRRPGGMTSTYGRTPMYGSQ  
 TPMPYSGSRTPMYGSQTPLDGSRTPHYGSQTPHLDGSRTPAQSGAWDPNNPNTPSRAEEYEFADDEP  
 TPSPQAYGGTTPNPQTPGYDPSPSPQVNPQYNPQTPGTPAMYNTDQFSPYAAPSPQGSYQPSYHQV  
 APSPAGYQNTHTSPASYHTPSPMAYQASPSVPGYSPMTPGAPSPGGYNPHTPGSGIEQNSDWTDDI  
 QYKVRDYLDTQVVGQTVIRSVTGMCSVYLDKSEKVVSISSHELEPITPTKNNKVKVILGEDREATGV  
 LLSIDGEDGIVRMDLDEQLKILNLRFLGKLLA

TRTRPLE - GFP Tag - V

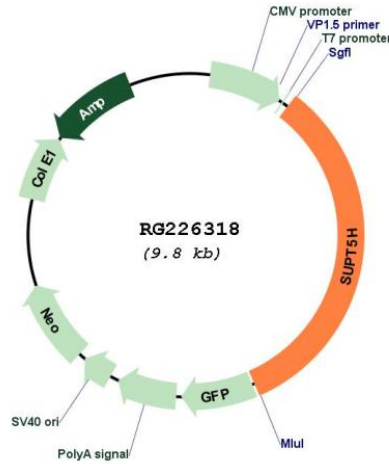
**Restriction Sites:**

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM\_001130825

ORF Size: 3249 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.

<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>	<u>NM_001130825.1, NP_001124297.1</u>
<b>RefSeq Size:</b>	3722 bp
<b>RefSeq ORF:</b>	3252 bp
<b>Locus ID:</b>	6829
<b>UniProt ID:</b>	<u>O00267</u>
<b>Cytogenetics:</b>	19q13.2
<b>Protein Families:</b>	Transcription Factors
<b>Gene Summary:</b>	<p>Component of the DRB sensitivity-inducing factor complex (DSIF complex), which regulates mRNA processing and transcription elongation by RNA polymerase II. DSIF positively regulates mRNA capping by stimulating the mRNA guanylyltransferase activity of RNGTT/CAP1A. DSIF also acts cooperatively with the negative elongation factor complex (NELF complex) to enhance transcriptional pausing at sites proximal to the promoter. Transcriptional pausing may facilitate the assembly of an elongation competent RNA polymerase II complex. DSIF and NELF promote pausing by inhibition of the transcription elongation factor TFIIIS/S-II. TFIIIS/S-II binds to RNA polymerase II at transcription pause sites and stimulates the weak intrinsic nuclease activity of the enzyme. Cleavage of blocked transcripts by RNA polymerase II promotes the resumption of transcription from the new 3' terminus and may allow repeated attempts at transcription through natural pause sites. DSIF can also positively regulate transcriptional elongation and is required for the efficient activation of transcriptional elongation by the HIV-1 nuclear transcriptional activator, Tat. DSIF acts to suppress transcriptional pausing in transcripts derived from the HIV-1 LTR and blocks premature release of HIV-1 transcripts at terminator sequences.[UniProtKB/Swiss-Prot Function]</p>