10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# SPT5 Rabbit mAb

Catalog # AP76719

## Product Information

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|---|---|
| **Application** | WB, IHC-P, IHC-F |
| **Primary Accession** | O00267 |
| **Reactivity** | Rat, Human, Mouse |
| **Host** | Rabbit |
| **Clonality** | Monoclonal Antibody |
| **Isotype** | IgG |
| **Conjugate** | Unconjugated |
| **Purification** | Affinity Purified |
| **Calculated MW** | 121000 |

## Additional Information

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|---|---|
| **Gene ID** | 6829 |
| **Other Names** | SUPT5H |
| **Dilution** | WB~~1:1000 IHC-P~~N/A IHC-F~~N/A |
| **Format** | Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA. |
| **Storage** | Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles. |

## Protein Information

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|---|---|
| **Name** | SUPT5H |
| **Synonyms** | SPT5, SPT5H |
| **Function** | Component of the DRB sensitivity-inducing factor complex (DSIF complex), which regulates mRNA processing and transcription elongation by RNA polymerase II (PubMed:10075709, PubMed:10199401, PubMed:10421630, PubMed:10757782, PubMed:10912001, PubMed:11112772, PubMed:11553615, PubMed:12653964, PubMed:12718890, PubMed:15136722, PubMed:15380072, PubMed:9450929, PubMed:9857195). DSIF positively regulates mRNA capping by stimulating the mRNA guanylyltransferase activity of RNGTT/CAP1A (PubMed:10075709, PubMed:10421630, PubMed:10757782, PubMed:10912001, PubMed:11112772, PubMed:11553615, PubMed:12653964, PubMed:12718890, PubMed:15136722, PubMed:15380072, PubMed:9450929, PubMed:9857195). DSIF also acts cooperatively with the negative elongation factor complex (NELF complex) to enhance transcriptional pausing at sites |

proximal to the promoter (PubMed:10075709, PubMed:10199401, PubMed:10757782, PubMed:10912001, PubMed:11112772, PubMed:11553615, PubMed:12653964, PubMed:12718890, PubMed:15136722, PubMed:15380072, PubMed:9450929, PubMed:9857195). Transcriptional pausing may facilitate the assembly of an elongation competent RNA polymerase II complex (PubMed:10075709, PubMed:10199401, PubMed:10421630, PubMed:10757782, PubMed:10912001, PubMed:11112772, PubMed:11553615, PubMed:12653964, PubMed:12718890, PubMed:15136722, PubMed:15380072, PubMed:9450929, PubMed:9857195). DSIF and NELF promote pausing by inhibition of the transcription elongation factor TFIIS/S-II (PubMed:16214896). TFIIS/S-II binds to RNA polymerase II at transcription pause sites and stimulates the weak intrinsic nuclease activity of the enzyme (PubMed:16214896). 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 (PubMed:16214896). Following phosphorylation by CDK9, DSIF can also positively regulate transcriptional elongation (PubMed:16427012). Required for the efficient activation of transcriptional elongation by the HIV-1 nuclear transcriptional activator, Tat (PubMed:10393184, PubMed:10454543, PubMed:11809800, PubMed:9514752). 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 (PubMed:11112772, PubMed:14701750).

**Cellular Location** Nucleus.

**Tissue Location** Ubiquitously expressed.

## Background

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 TFIIS/S-II. TFIIS/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.

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