# SETD7 Protein, Human (His)

| | |
|---|---|
| **Cat. No.:** | HY-P76062 |
| **Synonyms:** | Histone-lysine N-methyltransferase SETD7; H3-K4-HMTase SETD7; SET7/9; KIAA1717; KMT7; SET7; SET9 |
| **Species:** | Human |
| **Source:** | E. coli |
| **Accession:** | Q8WTS6/NP_085151.1 (D2-K366) |
| **Gene ID:** | 80854 |
| **Molecular Weight:** | 47-50 kDa |

## PROPERTIES

| | |
|---|---|
| **AA Sequence** | D S D D E M V E E A V E G H L D D D G L P H G F C T V T Y S S T D R F E G N<br>F V H G E K N G R G K F F F F D G S T L E G Y Y V D D A L Q G Q G V Y T Y E D G<br>G V L Q G T Y V D G E L N G P A Q E Y D T D G R L I F K G Q Y K D N I R H G V C<br>W I Y Y P D G G S L V G E V N E D G E M T G E K I A Y V Y P D E R T A L Y G K F<br>I D G E M I E G K L A T L M S T E E G R P H F E L M P G N S V Y H F D K S T S S<br>C I S T N A L L P D P Y E S E R V Y V A E S L I S S A G E G L F S K V A V G P N<br>T V M S F Y N G V R I T H Q E V D S R D W A L N G N T L S L D E E T V I D V P E<br>P Y N H V S K Y C A S L G H K A N H S F T P N C I Y D M F V H P R F G P I K C I<br>R T L R A V E A D E E L T V A Y G Y D H S P P G K S G P E A P E W Y Q V E L K A<br>F Q A T Q Q K |
| **Appearance** | Lyophilized powder |
| **Formulation** | Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4. |
| **Endotoxin Level** | <1 EU/μg, determined by LAL method. |
| **Reconsititution** | It is not recommended to reconstitute to a concentration less than 100 μg/mL in $ddH_2O$. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose). |
| **Storage & Stability** | Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage. |
| **Shipping** | Room temperature in continental US; may vary elsewhere. |

## DESCRIPTION

| | |
|---|---|
| **Background** | SETD7 Protein, a histone methyltransferase, demonstrates specificity in monomethylating 'Lys-4' of histone H3. This methylation event serves as a distinctive mark associated with epigenetic transcriptional activation. SETD7 plays a pivotal |

role in the activation of transcription for genes such as collagenase or insulin. Recruited by IPF1/PDX-1 to the insulin promoter, it leads to the activation of transcription. Beyond histones, SETD7 exhibits methyltransferase activity toward non-histone proteins, including CGAS, p53/TP53, TAF10, and possibly TAF7, recognizing and binding the [KR]-[STA]-K motif in substrate proteins. Monomethylation of 'Lys-189' of TAF10 enhances its affinity for RNA polymerase II. Moreover, SETD7 monomethylates 'Lys-372' of p53/TP53, stabilizing the protein and amplifying p53/TP53-mediated transcriptional activation. Additionally, it monomethylates 'Lys-491' of CGAS, facilitating interaction between SGF29 and CGAS (By similarity).



Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA