# KAT5 Protein, Human (His)

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| **Cat. No.:** | HY-P71707 |
| **Synonyms:** | 60kDa Tat interactive protein; cPLA2 interacting protein; ESA1; Histone acetyltransferase HTATIP; HTATIP1; K(lysine) acetyltransferase 5; PLIP; Tat interacting protein, 60kDa; TIP; Tip60 |
| **Species:** | Human |
| **Source:** | E. coli |
| **Accession:** | Q92993 (E3-W513) |
| **Gene ID:** | 10524 |
| **Molecular Weight:** | Approximately 62.4 kDa |

## PROPERTIES

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| **AA Sequence** | E V G E I I E G C R L P V L R R N Q D N E D E W P L A E I L S V K D I S G R K L<br>F Y V H Y I D F N K R L D E W V T H E R L D L K K I Q F P K K E A K T P T K N G<br>L P G S R P G S P E R E V P A S A Q A S G K T L P I P V Q I T L R F N L P K E R<br>E A I P G G E P D Q P L S S S S C L Q P N H R S T K R K V E V V S P A T P V P S<br>E T A P A S V F P Q N G A A R R A V A A Q P G R K R K S N C L G T D E D S Q D S<br>S D G I P S A P R M T G S L V S D R S H D D I V T R M K N I E C I E L G R H R L<br>K P W Y F S P Y P Q E L T T L P V L Y L C E F C L K Y G R S L K C L Q R H L T K<br>C D L R H P P G N E I Y R K G T I S F F E I D G R K N K S Y S Q N L C L L A K C<br>F L D H K T L Y Y D T D P F L F Y V M T E Y D C K G F H I V G Y F S K E K E S T<br>E D Y N V A C I L T L P P Y Q R R G Y G K L L I E F S Y E L S K V E G K T G T P<br>E K P L S D L G L L S Y R S Y W S Q T I L E I L M G L K S E S G E R P Q I T I N<br>E I S E I T S I K K E D V I S T L Q Y L N L I N Y Y K G Q Y I L T L S E D I V D<br>G H E R A M L K R L L R I D S K C L H F T P K D W S K R G K W |
| **Biological Activity** | The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet. |
| **Appearance** | Lyophilized powder. |
| **Formulation** | Lyophilized from a 0.2 μm sterile filtered 10 mM Tris-HCl, 1 mM EDTA, 6% Trehalose, pH 8.0. |
| **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 $ddH_2O$. |
| **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

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| **Background** | KAT5, the catalytic subunit of the NuA4 histone acetyltransferase complex, is a key participant in the transcriptional activation of specific genes through the acetylation of nucleosomal histones H2A and H4. This acetylation modifies nucleosome-DNA interactions and facilitates the interaction of modified histones with other proteins, positively regulating transcription. The NuA4 complex, essential for various cellular processes such as growth induction, growth arrest, apoptosis, and DNA repair, plays a direct role in repairing DNA double-strand breaks by inhibiting TP53BP1 binding to chromatin. Additionally, KAT5 acetylates non-histone proteins involved in diverse pathways, including DNA repair, circadian regulation, autophagy, innate antiviral responses, and lipid metabolism. It acts as a crucial regulator of chromosome segregation and kinetochore-microtubule attachment during mitosis, catalyzing acetylation or crotonylation of target proteins to ensure accurate chromosome segregation and spindle positioning. KAT5's multifaceted roles make it a central player in cellular homeostasis and genome maintenance. |



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