

KAT5 Protein, Human, Recombinant (His)

General Information

Synonyms:	60 kDa Tat-interactive protein (Tip60);Lysine acetyltransferase 5;Protein lactyltransferase KAT5;Protein 2-hydroxyisobutyryltransferase KAT5;Protein crotonyltransferase KAT5;cPLA(2)-interacting protein;Histone acetyltransferase HTATIP (HIV-1 Tat interactive protein);HTATIP;Protein acetyltransferase KAT5;KAT5;Histone acetyltransferase KAT5;TIP60
Protein Construction:	3-513 aa
Species:	Human
Expression Host:	E. coli
Accession:	Q92993
Molecular Weight:	62.4 kDa (predicted)
AA Sequence:	EVGEIIEGCRLPVLRNQNEDWPLAEILSVKDISGRKLFYVHYIDFNKRLDEWVTHEERLDLKKIQFPKKEAKT PTKNGPLGSRPGSPEREVPASAQASGKTLPIPVQITLRFNLPKEREAIPIGGEPDQPLSSSSCLQPNHRSTKRKV EUVSPATPVPSETAPASVFPQNGAARRAVAAQPRKRKSNCLGTDESDSDGIPSAPRMTGSLVSDRSH DDIVTRMKNIECIELGRHRLKPWFYSPYPQELTLPVLYLCEFCLKYGRSLKCLQRHLTKCDLRHPPGNEIYRKG TISFFEIDGRKNKSYSQNLCLLAKCFLDHKTLTYDTPFLFYVMTEYDCKGFHIVGYFSKEKESTEDYNVACILTL PPYQRRGYGKLLIEFSYELSKVEGKTGTPEKPLSDLGLLSYRSYWSQTILEILMGLKSESGERPQITINEISEITSIK KEDVISTLQYLNLYYKGYILTSEDIVDGHARAMLKRLLRIDSCLHFTPKDWSKRGKW

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90% as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Tris-based buffer

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in sterile deionized water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Catalytic subunit of the NuA4 histone acetyltransferase complex which is involved in transcriptional activation of select genes principally by acetylation of nucleosomal histones H4 and H2A. This modification may both alter nucleosome-DNA interactions and promote interaction of the modified histones with other proteins which positively regulate transcription. This complex may be required for the activation of transcriptional programs associated with oncogene and proto-oncogene mediated growth induction, tumor suppressor mediated growth arrest and replicative senescence, apoptosis, and DNA repair. NuA4 may also play a direct role in DNA repair when recruited to sites of DNA damage. Component of a SWR1-like complex that specifically mediates the removal of histone H2A.Z/H2AZ1 from the nucleosome. Also acetylates non-histone proteins, such as ATM, NR1D2, RAN, FOXP3, ULK1 and RUBCNL/Pacer. Directly acetylates and activates ATM. Relieves NR1D2-mediated inhibition of APOC3 expression by acetylating NR1D2. Promotes FOXP3 acetylation and positively regulates its transcriptional repressor activity. Acetylates RAN at 'Lys-134'. Together with GSK3 (GSK3A or GSK3B), acts as a regulator of autophagy: phosphorylated at Ser-86 by GSK3 under starvation conditions, leading to activate acetyltransferase activity and promote acetylation of key autophagy regulators, such as ULK1 and RUBCNL/Pacer.

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