

Recombinant KAT5 protein

Catalog No: 81275, 81975

Expressed In: Baculovirus

Quantity: 20, 1000 µg

Concentration: 0.25 µg/µl

Source: Human

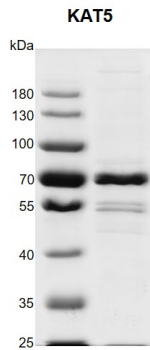
Buffer Contents: Recombinant KAT5 protein is supplied in 25 mM HEPES-NaOH pH 7.5, 300 mM NaCl, 10% glycerol, 0.04% Triton X-100, and 0.5 mM TCEP.

Background: KAT5 (Lysine Acetyltransferase 5), also called as TIP60, is a member of the MYST family of histone acetyl transferases. HATs play important roles in regulating chromatin remodeling, transcription and other nuclear processes by acetylating histone and nonhistone proteins. KAT5 is a 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. NuA4 histone acetyltransferase 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. KAT5 is also a component of a SWR1-like complex that specifically mediates the removal of histone H2A.Z/H2AZ1 from the nucleosome. Besides, it also acetylates non-histone proteins, such as ATM, NR1D2, RAN, FOXP3, ULK1 and RUBCNL/Pacer.

Protein Details: Recombinant KAT5 protein (accession number NP_874369.1) was expressed in baculovirus system as full length with an N-terminal FLAG tag. The molecular weight of KAT5 is 63.1 kDa.

Application Notes: Recombinant KAT5 protein is suitable for use in enzyme kinetics, inhibitor screening, and selectivity profiling.

Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product is guaranteed for 6 months from date of arrival.



Recombinant KAT5 protein gel.

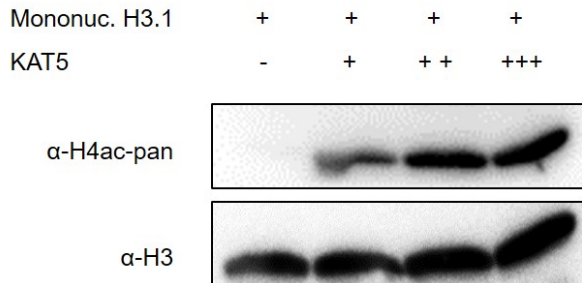
10% SDS-PAGE Coomassie staining.

MW: 63.1 kDa

Purity: >90%

Western blot for Recombinant KAT5 protein activity

0.5 µg Histone H4 (Cat. No. 31493) was incubated with 0 (-), 25 (+), 50 (++) , 100 (+++) ng Recombinant KAT5 protein respectively in reaction buffer containing 50 mM Tris-HCl pH 8.6, 0.02% Triton X-100, 2 mM MgCl₂, 1 mM TCEP and 20 µM acetyl-CoA for 2 hr at room temperature. Half of the reactions were run on a 12.5% SDS-PAGE gel and detected with H4ac-pan antibody (Cat. No. 39243). Western blot was used to detect the production of acetylated histone H4.



Western blot for Recombinant KAT5 protein activity

2 µg Recombinant Mononucleosomes H3.1 (Cat. No. 81070) were incubated with 0 (-), 25 (+), 50 (++) , 100 (+++) ng Recombinant KAT5 protein respectively in reaction buffer containing 50 mM Tris-HCl pH 8.6, 0.02% Triton X-100, 2 mM MgCl₂, 1 mM TCEP and 20 µM acetyl-CoA for 2 hr at room temperature. Half of the reactions were run on a 12.5% SDS-PAGE gel and detected with H4ac-pan antibody (Cat. No. 39243) and H3 antibody (Cat. No. 39763). Western blot was used to detect the production of acetylated histone H4. H3 was detected as a loading control.

