

Recombinant KAT1 / HAT1 protein

Catalog No: 81274, 81974

Expressed In: Baculovirus

Quantity: 20, 1000 µg

Concentration: 0.25 µg/µl

Source: Human

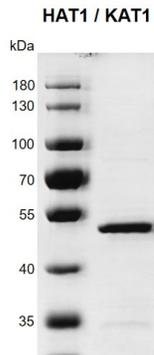
Buffer Contents: Recombinant KAT1 / HAT1 protein supplied in 25 mM HEPES-NaOH pH 7.5, 300 mM NaCl, 10% glycerol, 0.04% Triton X-100, and 0.5 mM TCEP.

Background: KAT1 / HAT1 (Histone Acetyltransferase 1), is a type B histone acetyltransferase that is involved in the rapid acetylation of newly synthesized cytoplasmic histones, which are in turn imported into the nucleus for *de novo* deposition onto nascent DNA chains. It acetylates soluble but not nucleosomal histone H4 at 'Lys-5' (H4K5ac) and 'Lys-12' (H4K12ac) and, to a lesser extent, acetylates histone H2A at 'Lys-5' (H2AK5ac). It has intrinsic substrate specificity that modifies lysine in recognition sequence GXGKXG. HAT1 may be involved in nucleosome assembly during DNA replication and repair as part of the histone H3.1 and H3.3 complexes. It may also play a role in DNA repair in response to free radical damage.

Protein Details: Full length KAT1 / HAT1 protein (accession number NP_003633.2) was expressed in baculovirus system with an N-terminal FLAG tag. The molecular weight of KAT1 / HAT1 is 50.8 kDa.

Application Notes: Recombinant KAT1 / HAT1 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 guaranteed for 6 months from date of arrival.



Recombinant KAT1 / HAT1 protein gel

10% SDS-PAGE gel with Coomassie blue staining

MW: 50.8 kDa

Purity: >90%

Western blot for Recombinant KAT1 / HAT1 protein activity

0.5 µg Histone H4 (Cat. No. 31493) was incubated with 0 (-), 25 (+), 50 (++) , 100 (+++) ng Recombinant HAT1 / KAT1 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.

Histone H4	-	+	+	+	+
KAT1	+++	-	+	++	+++

α-H4ac-pan

