

## Recombinant SUV420H1 (2-387) protein

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**Catalog No:** 81021, 81721

**Lot No:** 22817001

**Expressed In:** *E. coli*

**Quantity:** 50, 1000 µg

**Concentration:** 1.2 µg/µl

**Source:** Human

**Buffer Contents:** Recombinant SUV420H1 (2-387) protein is supplied at a concentration of 1.2 µg/µl in 25 mM Tris pH 8.0, 300 mM NaCl, 5% glycerol.

**Background:** SUV420H1 (Suppressor Of Variegation 4-20 Homolog 1, also known as KMT5B) is a histone methyltransferase that specifically trimethylates nucleosomal histone H4 on lysine 20 (H4K20). H4K20me3 is a histone marker that represents epigenetic transcriptional repression. SUV420H1 mainly functions in pericentric heterochromatin regions, thereby playing a central role in the establishment of constitutive heterochromatin in these regions. SUV420H1 is targeted to histone H3 via its interaction with RB1 family proteins. It plays a role in myogenesis by regulating the expression of target genes, such as EID3.

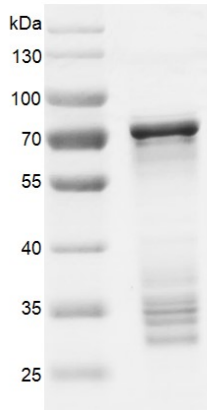
**Protein Details:** Recombinant SUV420H1 (2-387) protein corresponding to amino acids 2-387 of SUV420H1 protein (accession number NP\_060105.3) was expressed in *E. coli* cells and contains an N-terminal GST tag with a molecular weight of 71.1 kDa. Recombinant SUV420H1 (2-387) protein contains the SET domain of SUV420H1 that is responsible for methyltransferase activity.

**Application Notes:** Recombinant SUV420H1 (2-387) is suitable for use in the study of enzyme kinetics, inhibitor screening, and selectivity profiling.

**HMT Assay Conditions:** 2 µg Recombinant Nucleosomes were incubated with different concentrations of SUV420H1 (2-387) protein in 30 µl reaction system containing 50 mM Tris-HCl, pH 8.6, 0.02% Triton X-100, 2 mM MgCl<sub>2</sub>, 1 mM TCEP, and 50 µM SAM for 3 hours at room temperature. Western Blot was used to detect the generation of reaction products.

**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.

### SUV420H1 (2-387)



### Recombinant SUV420H1 (2-387) protein gel.

10% SDS-PAGE gel stained with Coomassie blue.

MW: 71.1 kDa

Purity: > 75%

SUV420H1(2-387)	+++	-	+	++	+++	+++
Nucleosomes (H3.1)	-	+	+	+	+	-
Histone Octamers (H3.1)	-	-	-	-	-	+

a-H4K20me3



### Recombinant SUV420H1 (2-387) activity assay

2  $\mu$ g Recombinant Nucleosomes (H3.1) (Cat. No. 31466) were incubated with 0  $\mu$ g (-), 0.2  $\mu$ g (+), 0.4  $\mu$ g (++) , 0.8  $\mu$ g (+++) SUV420H1 (2-387) protein, respectively, in 30  $\mu$ l reaction system containing 50 mM Tris-HCl, pH 8.6, 0.02% Triton X-100, 2 mM MgCl<sub>2</sub>, 1 mM TCEP, 50  $\mu$ M SAM for 3 hr at room temperature. 6  $\mu$ l reaction products were loaded and run on a 12.5% SDS-PAGE gel. Western Blot was used to detect the generation of reaction products (H4K20me3 antibody, Cat. No. 39672, 1:1000 dilution). SUV420H1 (2-387) only was used as negative control.

The Western blot result shows that nucleosomes are much better than histone octamers as the substrate of SUV420H1(2-387).