

Recombinant SUV39H2 protein

Catalog No: 81012, 81712

Lot No: 13217001

Expressed In: *E. coli*

Quantity: 20, 1000 µg

Concentration: 0.5 µg/µl

Source: Human

Buffer Contents: Recombinant SUV39H2 protein is supplied at a concentration of 0.5 µg/µl in 25 mM Tris pH 8.0, 300 mM NaCl, 5% glycerol.

Background: SUV39H2 (Suppressor Of Variegation 3-9 Homolog 2, also known as KMT1B) is a histone methyltransferase that specifically trimethylates Lys-9 of histone H3. SUV39H2 prefers H3K9me0 as a substrate over H3K9me1 and H3K9me2. SUV39H2 can transfer up to three methyl groups to lysine 9 of histone H3 but the last methylation reaction is much slower than the first two steps. SUV39H1 and SUV39H2 can regulate the telomere length in mammalian cell. SUV39H2 transcripts remain specifically expressed in adult testes.

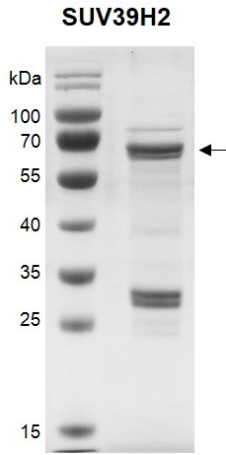
Histone H3 Lys-9 trimethylation represents a specific tag for epigenetic transcriptional repression by recruiting HP1 (CBX1, CBX3 and/or CBX5) proteins to methylated histones. H3K9me3 plays an important role in the establishment of constitutive heterochromatin at pericentric and telomere regions. H3K9me3 is also required to direct DNA methylation at pericentric repeats.

Protein Details: Recombinant SUV39H2 was expressed in *E. coli* cells as the full length protein (accession number NP_078946.1) with an N-terminal GST tag. The molecular weight of SUV39H2 is 66.8 kDa.

Application Notes: Recombinant SUV39H2 is suitable for use in the study of enzyme kinetics, inhibitor screening, and selectivity profiling.

HMT Assay Conditions: 3 µM H3K9me1 (1-21 aa) peptide was incubated with different concentrations of SUV39H1 (82-412) protein in a 10 µl reaction system containing 50 mM Tris-HCl pH 8.6, 0.02% Triton X-100, 2 mM MgCl₂, 1 mM TCEP and 50 µM SAM for 1 hour, then 10 µl H3K9me2 antibody and SA-XL665 mixture (each 1:100 dilution in HTRF Detection Buffer) was added to each reaction system and incubated for 30 min. All the operations and reactions were performed at room temperature. HTRF assay was used for detection.

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.

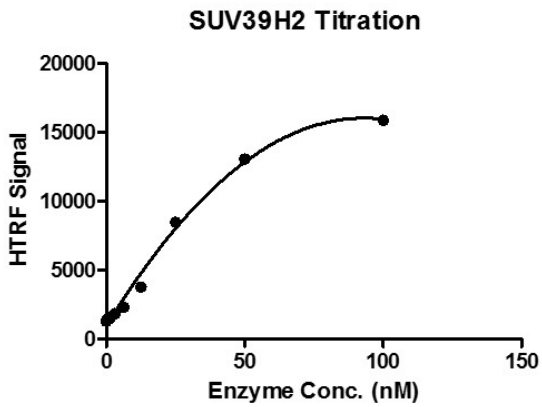


Recombinant SUV39H2 protein

10% SDS-PAGE Coomassie staining

MW: 66.8 kDa

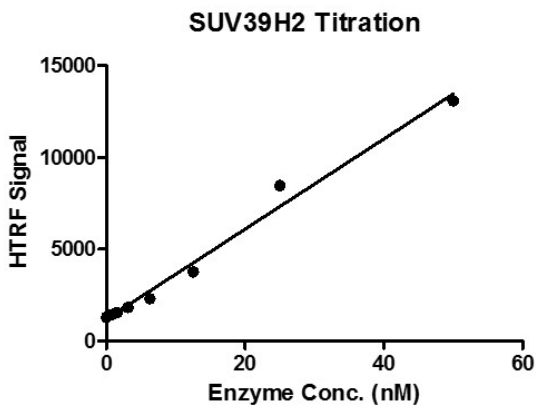
Purity: > 55%



HTRF assay for SUV39H2 activity

3 μ M H3 (1-21) peptide was incubated with SUV39H2 in reaction buffer for 3 hours at room temperature.

Anti-H3K9me2 antibody was used to detect reaction products.



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