Recombinant SUV39H1 (82-412) protein

Catalog No: 81020, 81720
Lot No: 22717001
Expressed In: *E. coli*

Quantity: 20, 1000 µg
Concentration: 0.1 µg/µl
Source: Human

Buffer Contents: Recombinant SUV39H1 (82-412) protein is supplied at a concentration of 0.1 µg/µl in 25 mM Tris pH 8.0, 300 mM NaCl, 10% glycerol.

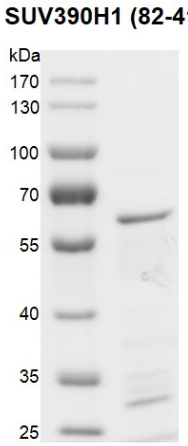
Background: SUV39H1 (Suppressor Of Variegation 3-9 Homolog 1, also known as KMT1A) is a histone methyltransferase that specifically trimethylates Lys-9 of histone H3, which results in transcriptional gene silencing. SUV39H1 is targeted to histone H3 via its interaction with RB1 and is involved in many processes, such as repression of MYOD1-stimulated differentiation, regulation of the control switch for exiting the cell cycle and entering differentiation, repression by the PML-RARA fusion protein, BMP-induced repression, repression of switch recombination to IgA and regulation of telomere length. SUV39H1 and SUV39H2 can regulate the telomere length in mammalian cell.

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.

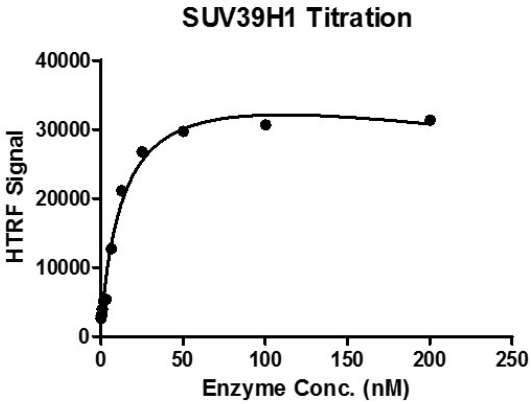
Protein Details: Recombinant SUV39H1 (82-412) protein corresponding to amino acids 82-412 of SUV39H1 protein (accession number NP_003164.1) was expressed in *E. coli* cells and contains an N-terminal GST tag with a molecular weight of 64.6 kDa. Recombinant SUV39H1 (82-412) protein contains the SET domain of SUV39H1 that is responsible for methyltransferase activity.

Application Notes: Recombinant SUV39H1 (82-412) 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 10 µl reaction system containing 50 mM Tris-HCl pH 8.6, 0.02% Triton X-100, 2 mM MgCl2, 1 mM TCEP 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 reactions performed at room temp. HTRF assay was used for detection.

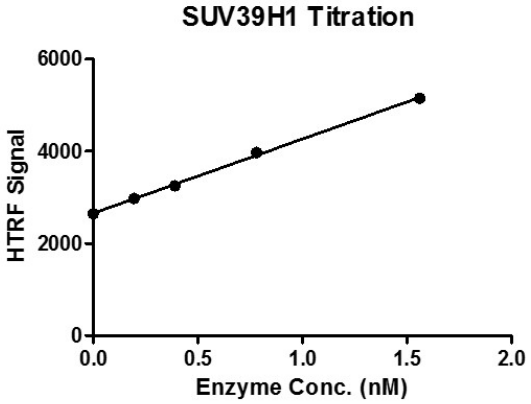
Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product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



Recombinant SUV39H1 (82-412) protein
10% SDS-PAGE Coomassie staining
MW: 64.6 kDa
Purity: > 75%



HTRF assay for SUV39H1 (82-412) activity.
3 µM H3K9me1 (1-21 aa) peptide was incubated with SUV39H1 (82-412) in reaction buffer for 1 hour at room temperature.
H3K9me2 antibody was used to detect reaction products.



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