Datasheet for ABIN7555631

SUV39H1 Protein (AA 1-412) (His tag)

Go to Product page

Overview

Quantity:	1 mg
Target:	SUV39H1
Protein Characteristics:	AA 1-412
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This SUV39H1 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant SUV39H1 Protein expressed in mammalian cells.
Sequence:	MAENLKGCSV CCKSSWNQLQ DLCRLAKLSC PALGISKRNL YDFEVEYLCD YKKIREQEYY LVKWRGYPDS ESTWEPRQNL KCVRILKQFH KDLERELLRR HHRSKTPRHL DPSLANYLVQ KAKQRRALRR WEQELNAKRS HLGRITVENE VDLDGPPRAF VYINEYRVGE GITLNQVAVG CECQDCLWAP TGGCCPGASL HKFAYNDQGQ VRLRAGLPIY ECNSRCRCGY DCPNRVVQKG IRYDLCIFRT DDGRGWGVRT LEKIRKNSFV MEYVGEIITS EEAERRGQIY DRQGATYLFD LDYVEDVYTV DAAYYGNISH FVNHSCDPNL QVYNVFIDNL DERLPRIAFF ATRTIRAGEE LTFDYNMQVD PVDMESTRMD SNFGLAGLPG SPKKRVRIEC KCGTESCRKY LF **Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**
Specificity:	If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.

Product Details

Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalian cells and purified in one-step affinity chromatography • The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins. • State-of-the-art algorithm used for plasmid design (Gene synthesis). This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein. If you are not interested in a full length protein, please contact us for individual protein fragments. The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.
Purity:	> 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)
Grade:	custom-made

Target Details

Target:	SUV39H1
Alternative Name:	SUV39H1 (SUV39H1 Products)
Background:	Histone-lysine N-methyltransferase SUV39H1 (EC 2.1.1.355) (Histone H3-K9 methyltransferase 1) (H3-K9-HMTase 1) (Lysine N-methyltransferase 1A) (Position-effect variegation 3-9 homolog) (Suppressor of variegation 3-9 homolog 1) (Su(var)3-9 homolog 1),FUNCTION: Histone methyltransferase that specifically trimethylates 'Lys-9' of histone H3 using monomethylated H3 'Lys-9' as substrate. Also weakly methylates histone H1 (in vitro). H3 'Lys-9' trimethylation represents a specific tag for epigenetic transcriptional repression by recruiting HP1 (CBX1, CBX3 and/or CBX5) proteins to methylated histones. Mainly functions in heterochromatin regions, thereby playing a central role in the establishment of constitutive heterochromatin at pericentric and telomere regions. H3 'Lys-9' trimethylation is also required to direct DNA methylation at pericentric repeats. 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

Target Details

	of switch recombination to IgA and regulation of telomere length. Component of the eNoSC (energy-dependent nucleolar silencing) complex, a complex that mediates silencing of rDNA in response to intracellular energy status and acts by recruiting histone-modifying enzymes. The eNoSC complex is able to sense the energy status of cell: upon glucose starvation, elevation of NAD(+)/NADP(+) ratio activates SIRT1, leading to histone H3 deacetylation followed by dimethylation of H3 at 'Lys-9' (H3K9me2) by SUV39H1 and the formation of silent chromatin in the rDNA locus. Recruited by the large PER complex to the E-box elements of the circadian target genes such as PER2 itself or PER1, contributes to the conversion of local chromatin to a heterochromatin-like repressive state through H3 'Lys-9' trimethylation. {ECO:0000269|PubMed:14765126, ECO:0000269|PubMed:16449642, ECO:0000269|PubMed:16818776, ECO:0000269|PubMed:16858404, ECO:0000269|PubMed:18004385, ECO:0000269|PubMed:18485871, ECO:0000269|PubMed:30111536}., FUNCTION: (Microbial infection) Plays a role in defense against mycobacterial infections. Methylates M.tuberculosis HupB on 'Lys-140', probably methylates HupB of M.bovis also. Methylation has an inhibitory effect on mycobacterial growth in the host. Macrophages expressing about 60 % SUV39H1 are slightly more susceptible to M.bovis or M.tuberculosis infection. Chaetocin (an inhibitor of this enzyme) increases macrophage survival of M.tuberculosis. This protein inhibits biofilm formation by M.tuberculosis via 'Lys-140' trimethylation. {ECO:0000269|PubMed:29170282}.
Molecular Weight:	47.9 kDa
UniProt:	O43463

Application Details

Application Notes:	We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C

Handling

Storage Comment:	Store at -80°C.
Expiry Date:	12 months