

NSD1-SET recombinant protein

Recombinant NSD1-SET protein

CATALOG #
AAA59705

HOST
E Coli

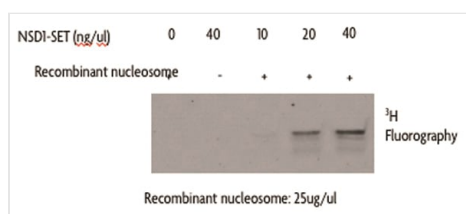
PRODUCT SYNONYMS

NSD1-SET; Recombinant NSD1-SET protein; STO; KMT3B; SOTOS; ARA267; SOTOS1; NSD1-SET recombinant protein

PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	The recombinant protein is >95% pure by SDS-PAGE.
Form/Format	50ug of recombinant NSD1-SET peptide (aa 1852-2082) containing an N-terminal GST-Tag expressed in E Coli cells, supplied in 25mM Tris, pH7.4, 150mM NaCl and 5% glycerol.
Protein Species	Human
Tag	GST-Tag
Notes	Recombinant NSD1-SET protein is suitable for use in the study of enzyme kinetics, inhibitor screening, and selectivity profiling. HMT Assay Conditions: 30 ng/ul recombinant nucleosomes were incubated with 30 ng/ul recombinant NSD1-SET protein in reaction buffer including 50mM TrisCl, pH 8.6, 0.02% Triton X-100, 2mM MgCl ₂ , 1mM TCEP, 9 nCi/ul 3H-SAM for 2 hours at room temperature. Activity was detected by fluorography.
Dry Ice Note	The product may be shipped with dry ice, and an additional fee may be added to your shipping cost.
Preparation and Storage	Recombinant proteins in solution are temperature sensitive and must be stored at -80 degree C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. Shipping Temp: Dry Ice

IMAGES



Application Data

NSD1-SET activity assay using Recombinant Nucleosomes as substrates. Recombinant Nucleosomes were used as substrates in an assay measuring the methyltransferase activity of NSD1-SET. Activity was detected by fluorography.



SDS-PAGE

Recombinant NSD1-SET protein gel. Recombinant NSD1-SET run on an SDS-PAGE gel and stained with Coomassie blue.

ADDITIONAL INFORMATION

Related Product Information for NSD1-SET recombinant protein	Short Description: Recombinant NSD1-SET peptide that includes amino acids 1852-2082 that contains the SET domain sequence of the human NSD1 protein (accession number NP_071900.2) was expressed in E Coli and contains an N-terminal GST-Tag with an observed molecular weight of 51 kDa. The recombinant protein is >=95% pure by SDS-PAGE. It is suitable for use in the study of enzyme kinetics, inhibitor screening, and selectivity profiling. Background: NSD1 (Nuclear Receptor Binding SET Domain Protein 1) is a histone methyltransferase that preferentially methylates lysine 36 of histone H3 and lysine 20 of histone H4 in vitro. NSD1 is a transcriptional intermediary factor capable of both negatively or positively influencing transcription, depending on the cellular context. NSD1 protein contains a SET domain, 2 LXXLL motifs, 3 nuclear translocation signals (NLSs), 4 plant homeodomain (PHD) finger regions, and a proline-rich region. The encoded protein enhances androgen receptor (AR) transactivation, and this enhancement can be increased further in the presence of other androgen receptor-associated coregulators. This protein may act as a nucleus-localized, basic transcriptional factor as well as a bifunctional transcriptional regulator. Mutations of this gene have been associated with Sotos syndrome and Weaver syndrome. One version of childhood acute myeloid leukemia is the result of a cryptic translocation with the breakpoints occurring within nuclear receptor-binding Su(var), Enhancer of zeste (EZH2), and Trithorax Domain Protein 1 on chromosome 5 and Nucleoporin, 98 kd on chromosome 11. NSD1-SET includes the SET domain of NSD1. The SET domain is a 130 to 140 amino acid, evolutionary conserved motif that was initially characterized in the Drosophila proteins Su(var)3-9, EZH2 and TrxG and plays a crucial role in substrate recognition and enzymatic activity.
Product Categories/Family for NSD1-SET recombinant protein	Recombinant Proteins ; Histone Methyltransferase (HMT)

NCBI AND UNIPROT INFORMATION

NCBI GI #	19923586
NCBI GeneID	64324
NCBI Accession #	NP_071900.2
NCBI GenBank Nucleotide #	NM_022455
UniProt Accession #	Q96L73 ; Q96PD8 ; Q96RN7
Molecular Weight	284,264 Da
NCBI Official Full Name	histone-lysine N-methyltransferase, H3 lysine-36 and H4 lysine-20 specific isoform b
NCBI Official Synonym Full Names	nuclear receptor binding SET domain protein 1
NCBI Official Symbol	NSD1
NCBI Official Synonym Symbols	STO; KMT3B; SOTOS; ARA267; SOTOS1
NCBI Protein Information	histone-lysine N-methyltransferase, H3 lysine-36 and H4 lysine-20 specific
UniProt Protein Name	Histone-lysine N-methyltransferase, H3 lysine-36 and H4 lysine-20 specific
UniProt Gene Name	NSD1
UniProt Synonym Gene Names	ARA267; KMT3B
UniProt Entry Name	NSD1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.