



Catalog Number: 11552-HNCE

General Information

Gene Name Synonym:

DOT1; KMT4

Protein Construction:

A DNA sequence encoding the human DOT1L (NP_115871.1) N-terminal segment (Gly 2-Lys 416) was expressed and purified, with two additional amino acids (Gly & Pro) at the N-terminus.

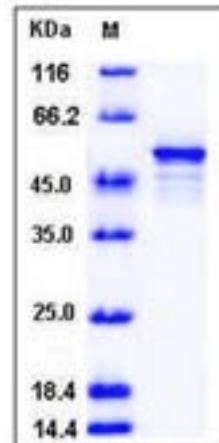
Source: Human

Expression Host: E. coli

QC Testing

Purity: > 90 % as determined by SDS-PAGE

SDS-PAGE:



Protein Description

Histone-lysine N-methyltransferase, H3 lysine-79 specific, also known as Histone H3-K79 methyltransferase, DOT1-like protein, Lysine N-methyltransferase 4 and DOT1L, is a nucleus protein which belongs to the DOT1 family. In contrast to other lysine histone methyltransferase, DOT1L does not contain a SET domain, suggesting the existence of another mechanism for methylation of lysine residues of histones. DOT1L is an histone methyltransferase. It methylates 'Lys-79' of histone H3. Nucleosomes are preferred as substrate compared to free histones. DOT1L binds to DNA. Methylation of lysine 79 on histone H3 (H3K79) is mediated by DOT1L. It is involved in the regulation of telomeric silencing, development, cell cycle checkpoint and transcription. Mass spectrometry of the DOT1L-containing complex revealed that AF9, ENL and NPM1 were shown to be major DOT1L-interacting proteins. DOT1L might control AF9- and ENL-mediated transcription, regulate RNA processing, and function as a histone chaperone in a NPM1-dependent manner.

References

- 1.Nagase T. et al., 2001, DNA Res. 8:85-95.
- 2.Feng Q. et al., 2002, Curr. Biol. 12:1052-8.
- 3.Dephoure N. et al., 2008, Proc. Natl. Acad. Sci. USA. 105:10762-7.

Usage Guide

Storage:

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

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