

# Human DOT1L / KMT4 Protein



Sino Biological  
Biological Solution Specialist

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

### Endotoxin:

Please contact us for more information.

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Gly

### Molecular Mass:

The recombinant human DOT1L comprises 417 amino acids and has a predicted molecular mass of 47.6 kDa. It migrates as an approximately 50 kDa band in SDS-PAGE under reducing conditions as predicted.

### Formulation:

Lyophilized from sterile 20mM HEPES, 150mM NaCl, 1mM EDTA, 15% glycerol, pH 7.5

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

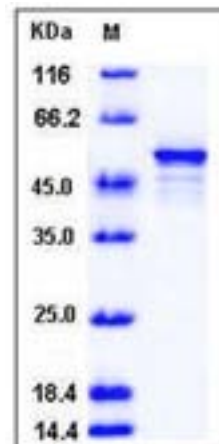
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## 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.

Manufactured By Sino Biological Inc., FOR RESEARCH USE ONLY. NOT FOR USE IN HUMANS.

For US Customer: Fax: 267-657-0217 • Tel: 215-583-7898

Global Customer: Fax :+86-10-5862-8288 • Tel:+86-400-890-9989 • <http://www.sinobiological.com>