



# Recombinant Protein Technical Manual

## Recombinant Human DOT1L/KMT4 Protein

RPES1182

### Product Data:

**Product SKU:** RPES1182

**Size:** 20µg

**Species:** Human

**Expression host:** E. coli

**Uniprot:** NP\_115871.1

### Protein Information:

**Molecular Mass:** 47.6 kDa

**AP Molecular Mass:** 50 kDa

**Tag:**

**Bio-activity:**

**Purity:** > 90 % as determined by reducing SDS-PAGE.

**Endotoxin:** Please contact us for more information.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

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

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

**Synonyms:** DOT1;KMT4

## Immunogen Information:

**Sequence:** Gly 2-Lys 416

## Background:

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.