

# Intracellular Delivery of DNA and Protein by a Novel Cell-Permeable Peptide Derived from DOT1L

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## Supplementary figures and figure legends

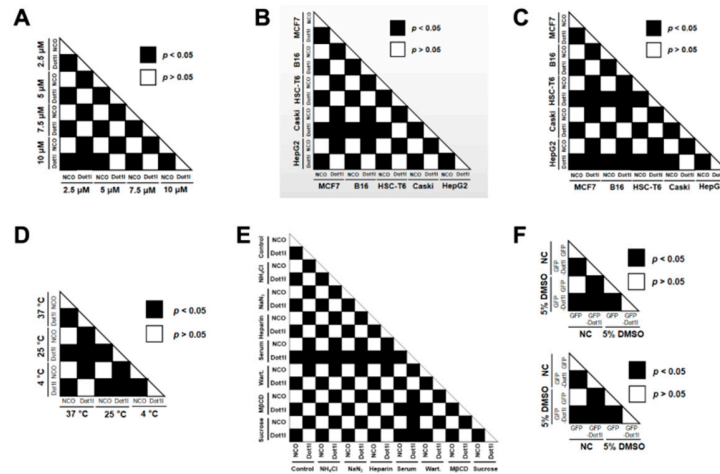


Figure S1 Statistical analysis.

A. Corresponding to Figure 2B.

B. Corresponding to Figure 2D of w/o DMSO pretreatment part.

C. Corresponding to Figure 2D of 5% DMSO pretreatment part.

D. Corresponding to Figure 3B.

E. Corresponding to Figure 3D.

F. Corresponding to Figure 7C.

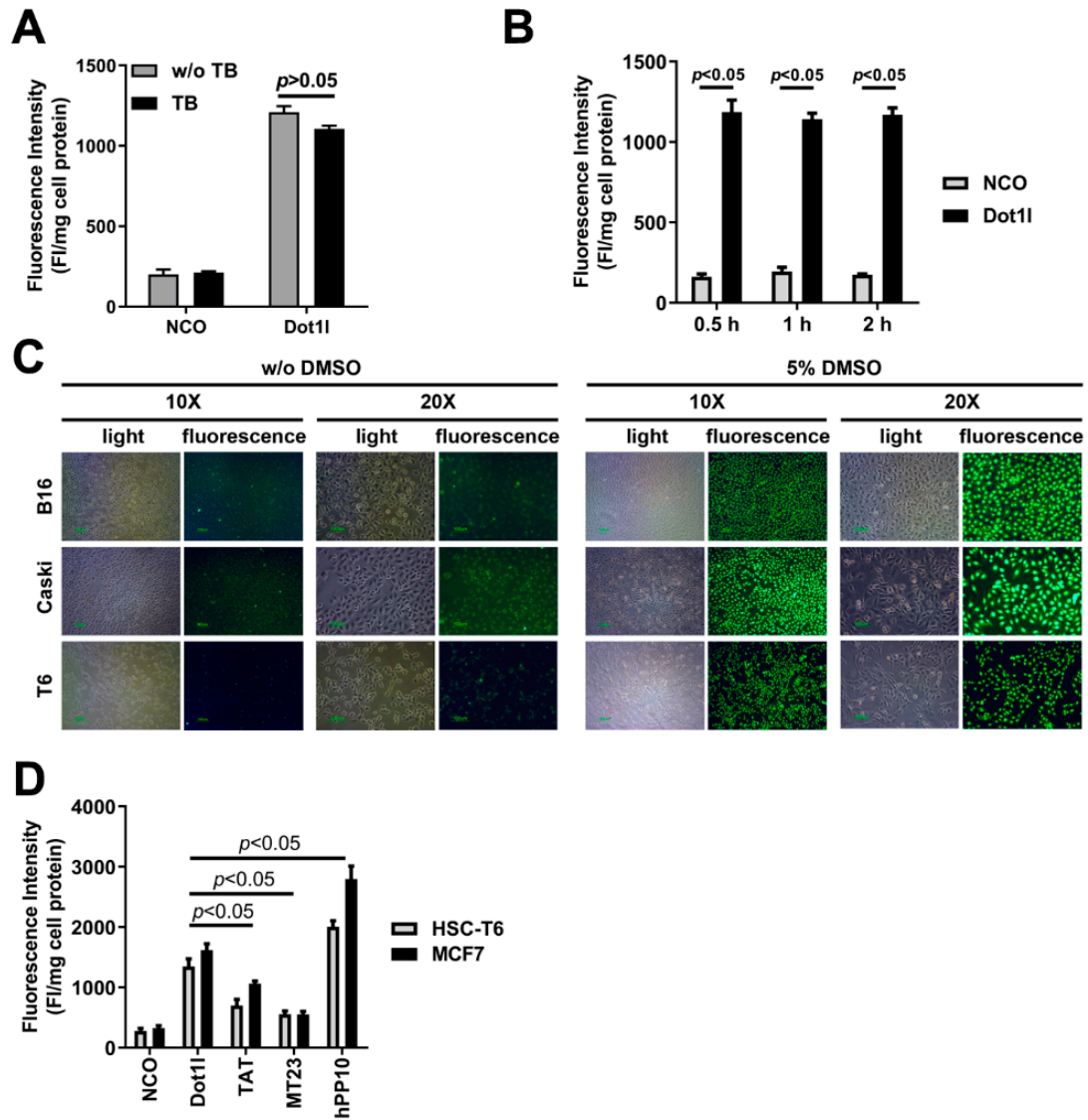


Figure S2 Penetration efficiency of Dot1l in different conditions.

- A. Quantification of Dot1l penetration with or without TB treatment.
- B. Effects of different incubation time to the Dot1l penetration.
- C. Penetration efficiency of Dot1l in different cell lines.
- D. Comparison of penetration efficiency from different CPPs in MCF7 and HSC-T6 cells.

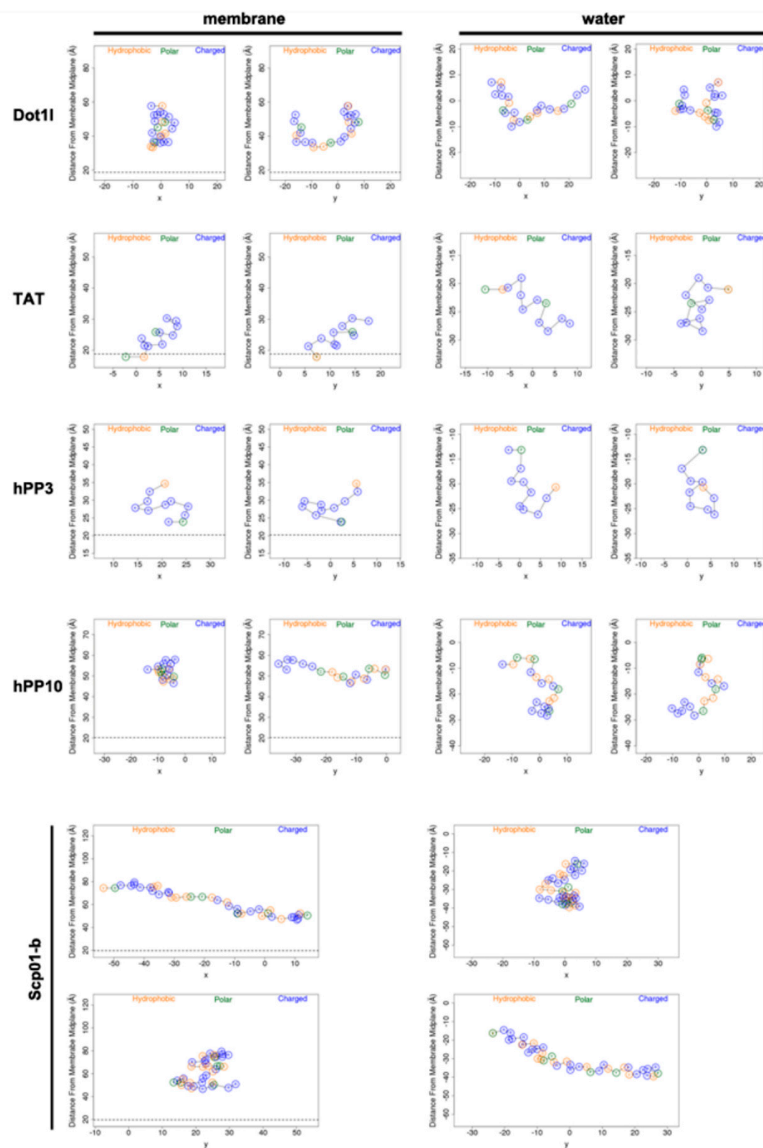


Figure S3 Prediction of different CPP-membrane interaction in aqueous and lipid bilayer environment.

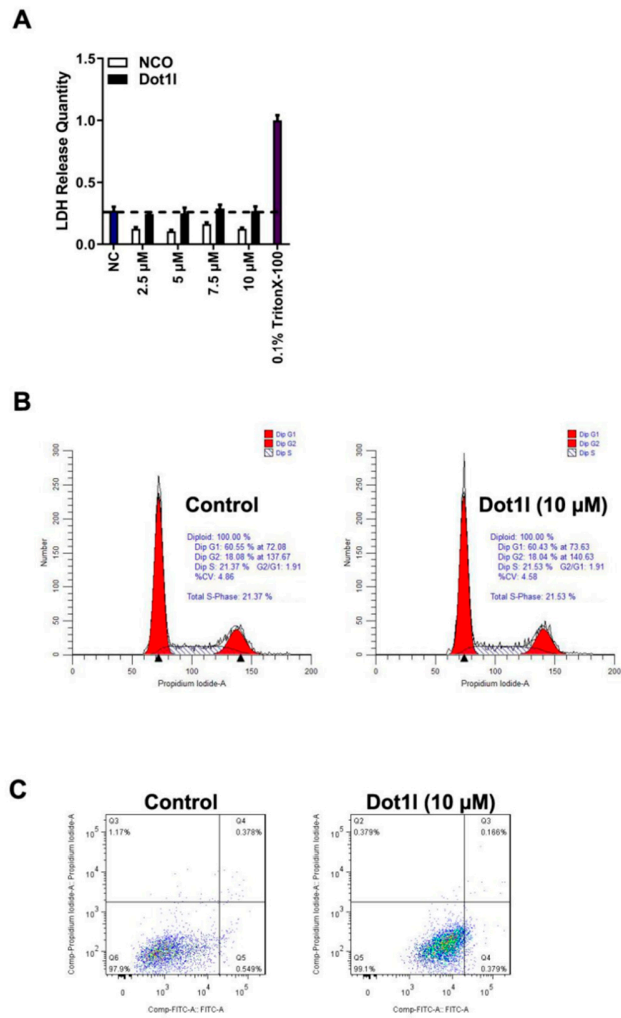


Figure S4 Dot1l safety examined by LDH release, cell cycle and cell apoptosis assay.

- A. LDH release quantity assay in MCF7 cells treated with Dot1l at different concentrations,
- B. Cell cycle examined by flow cytometry.
- C. Cell apoptosis examined by flow cytometry with or without Dot1l incubation.

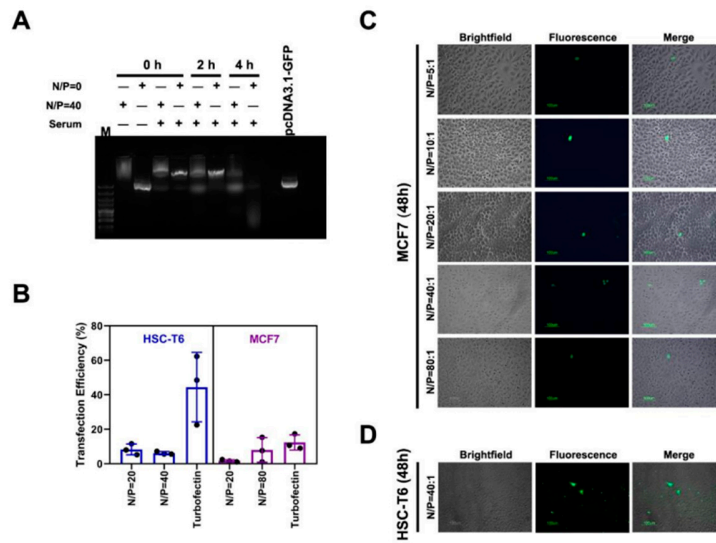


Figure S5 Stability of Dot11/pDNA complex and Dot11 peptide mediated pDNA transfection.

A. Agarose gel examination of Dot11 peptide and pcDNA3.1-GFP complex at different N/P ratio in 50% serum solution.

B. Transfection efficiency quantification of Dot11 peptide/pDNA in different cell lines.

C. Dot11 peptide mediated pDNA transfection in MCF7 cells (48 hrs) examined by fluorescence microscope.

D. Dot11 peptide mediated pDNA transfection in HSC-T6 cells (48 hrs) examined by fluorescence microscope.