

## **Supporting Information**

### **Lactone stabilized by crosslinked cyclodextrin metal-organic frameworks to improve local bioavailability of topotecan in lung cancer**

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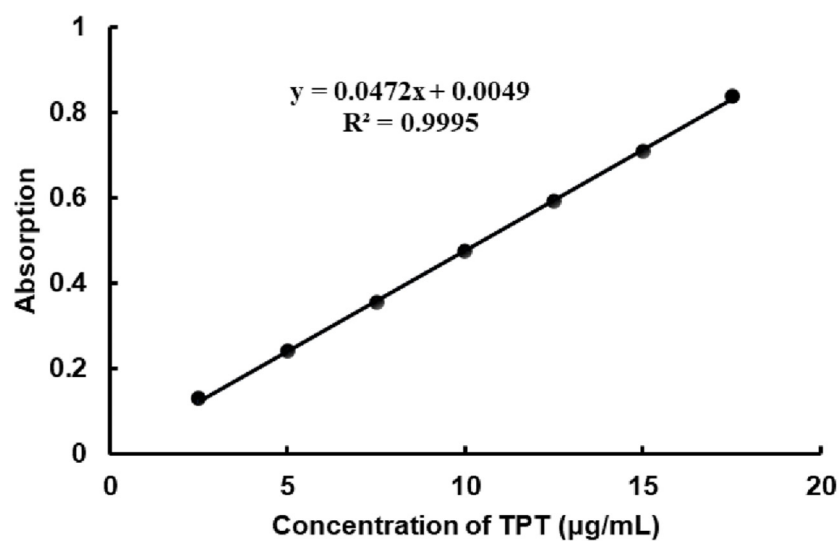
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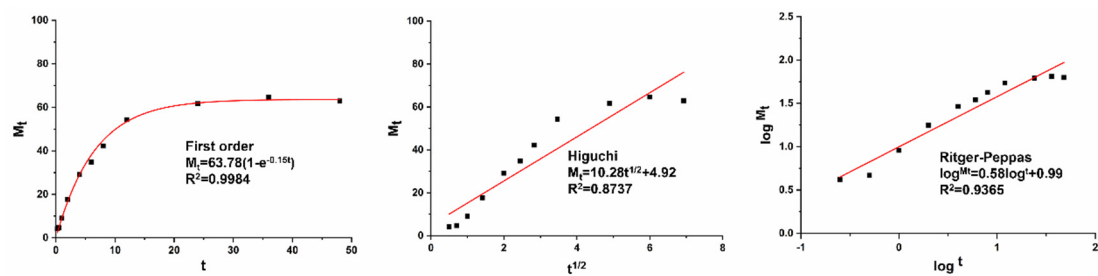
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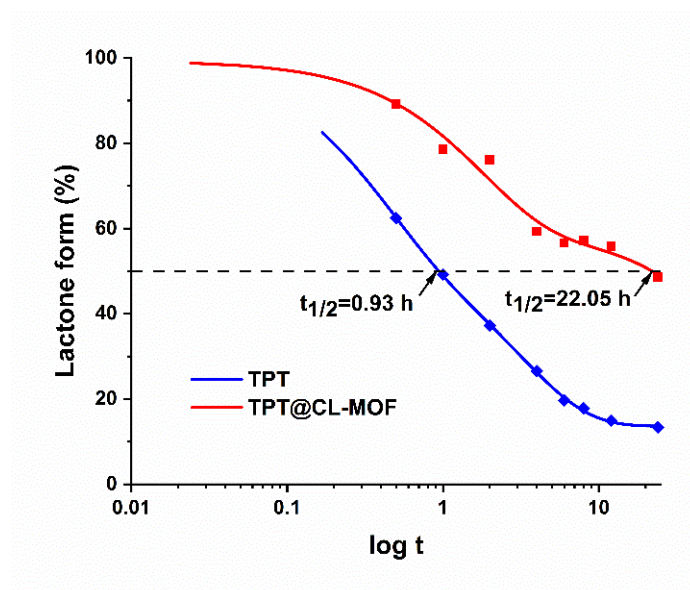
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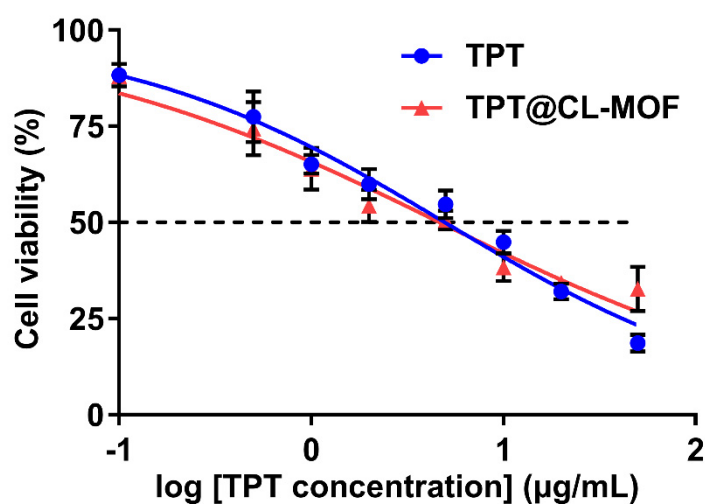
**Figure S1.** Linear calibration curve of the standard TPT solution.



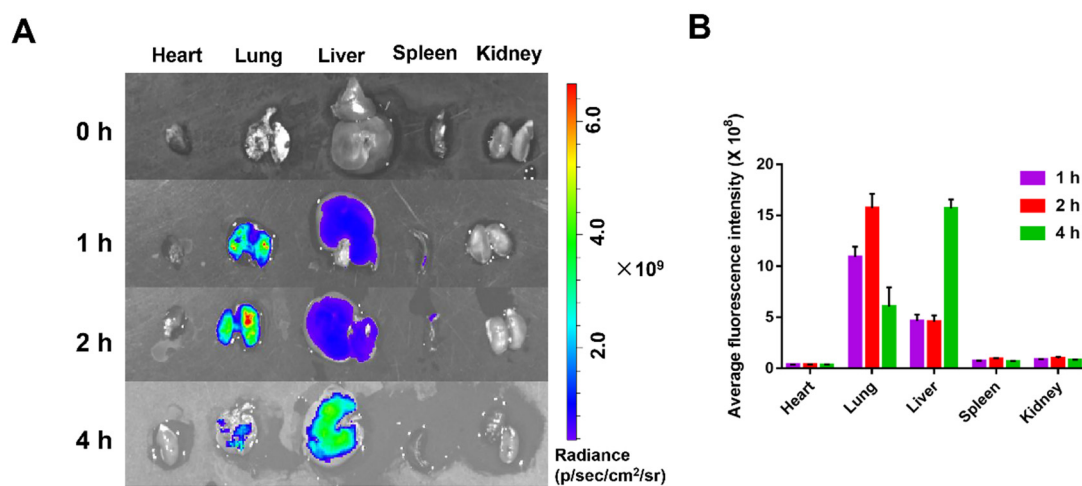
**Figure S2.** The *in vitro* release profile of TPT@CL-MOF was fitted by first-order kinetics, Higuchi models and Ritger-Peppas models.  $M_t$  is the amount of drug released at time  $t$ .



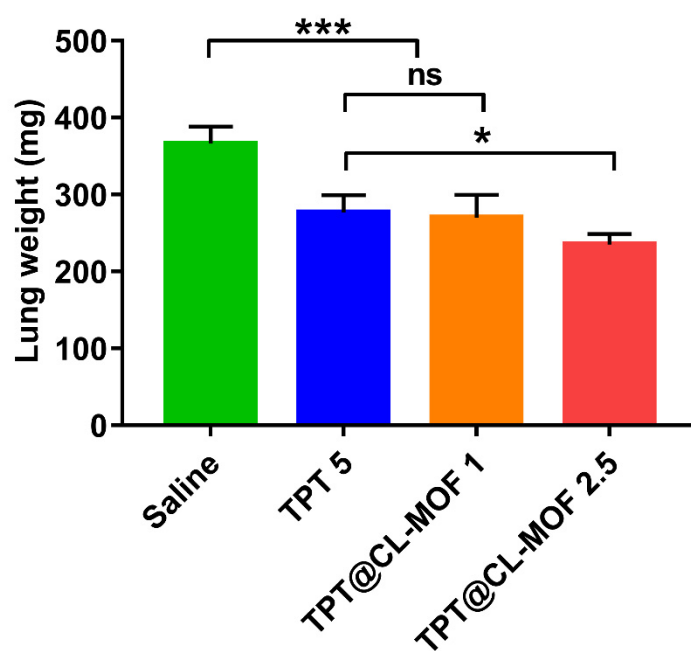
**Figure S3.** Degradation data of TPT and TPT@CL-MOF were fitted on biexponential decay equation in PBS (pH 7.4).  $t_{1/2}$  is the half-life of TPT against hydrolysis.



**Figure S4.** The  $IC_{50}$  of TPT and TPT@CL-MOF against B16F10 cells.



**Figure S5.** Tissue distributions of TPT@CL-MOF in C57BL/6 mice (A) and semi-quantitative analysis (B) ( $n = 3$ ).



**Figure S6.** The weight of lung tissues isolated from the C57BL/6 mice bearing B16F10 cells ( $n = 5$ ). TPT@CL-MOF 1 and TPT@CL-MOF 2.5 denotes TPT at 1 mg/kg and 2.5 mg/kg, respectively.  $*p < 0.05$ ,  $***p < 0.001$ . The abbreviation “ns” denotes no significant difference between relevant treatment groups.