

Supporting Information for

Macro-microporous ZIF-8 MOF complexed with lysosomal pH-adjusting hexadecylsulfonylethylamine as tumor vaccine delivery systems for improving anti-tumor cellular immunity

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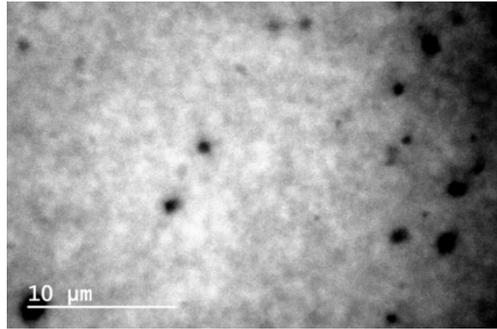


Figure S1. TEM images of the Alum adjuvant used in this study. The scale bar is 10 μm

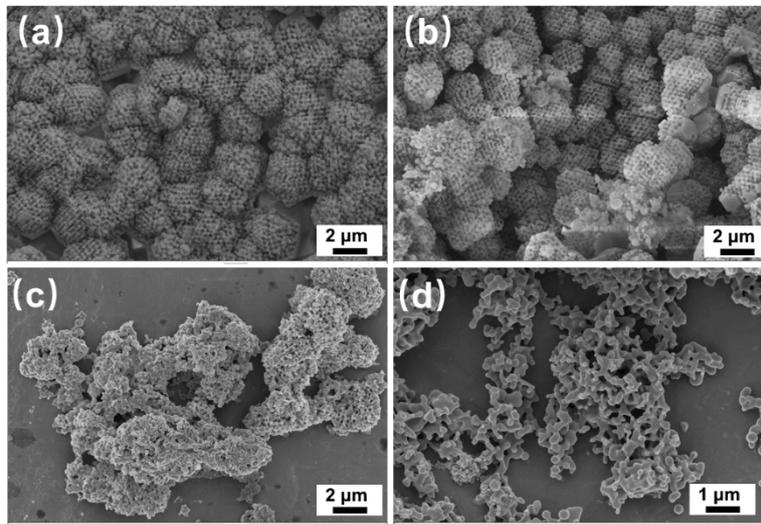


Figure S2. SEM images of SOM-ZIF-8 immersed in different PBS buffers at 37°C for (a) 0 day (as-prepared), (b) 7 days in pH 7.4 buffer, (c) 30 minutes in pH 5.0 buffer, and (d) 12 h in pH 5.0 buffer.

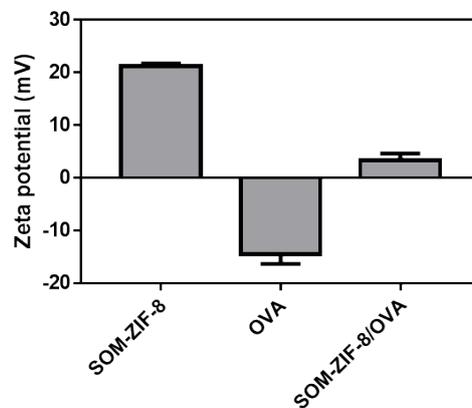


Figure S3. Zeta potential values of SOM-ZIF-8, OVA and SOM-ZIF-8/OVA.

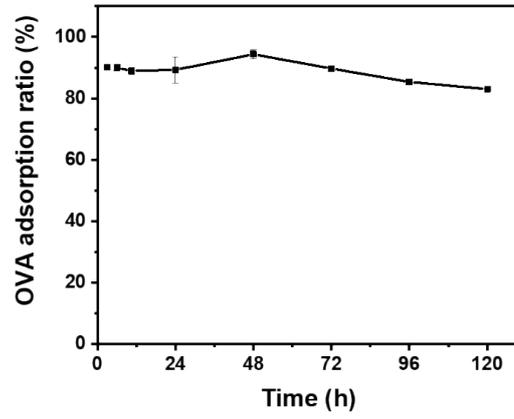


Figure S4. OVA adsorption ratio by SOM-ZIF-8 over time

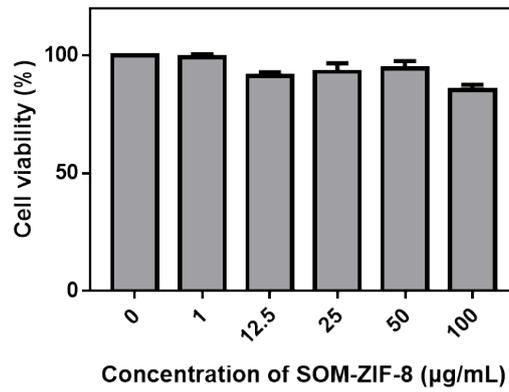


Figure S5. Relative viability of DC2.4 cells incubated with different concentrations of SOM-ZIF-8 particles.

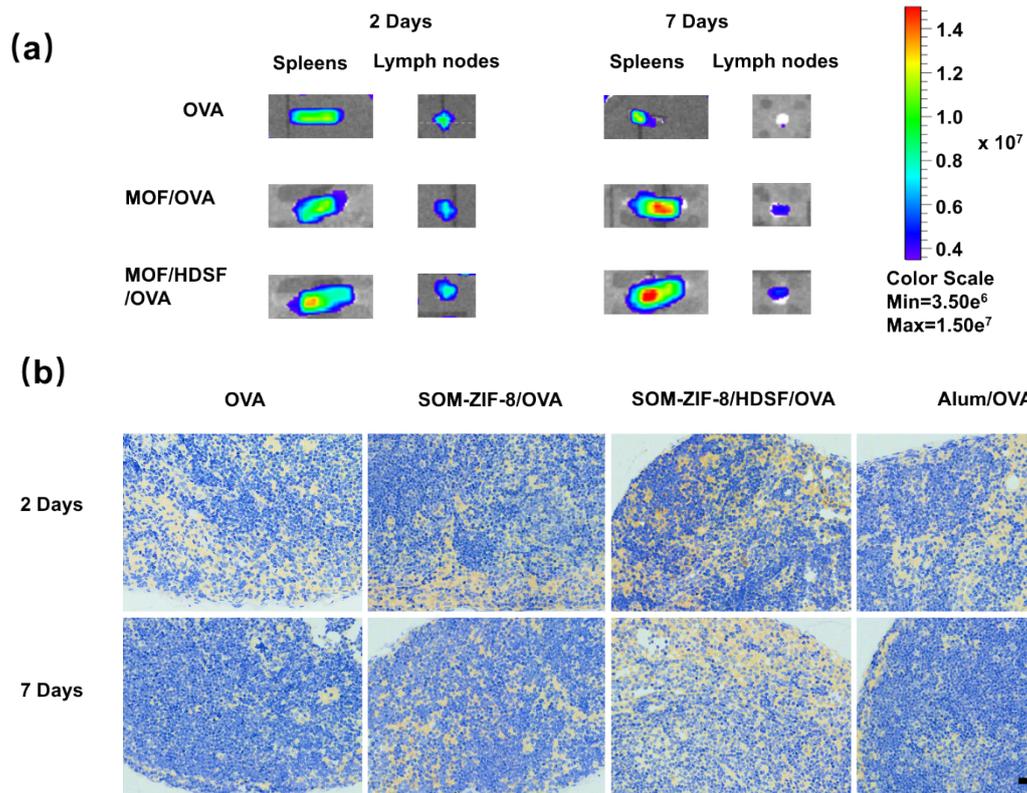


Figure S6. (a) Spleen and inguinal lymph nodes were isolated and visualized at 2 or 7 days after immunization. (b) Representative graphs of OVA transported to the inguinal lymph nodes of the mice at 2 or 7 days after immunization as detected using immunohistochemistry assay. The yellow areas represent OVA. The scale bar is 100 μ m.

(a)

Parameters/ Units	PBS	OVA	SOM-ZIF-8/ OVA	SOM-ZIF-8/ HDSF/OVA	Alum/OVA	Normal range
ALT (U/L)	98.22	102.88	92.74	89.86	90.667	10.06-96.47
AST (U/L)	217.31	153.14	126.94	136.11	134.41	36.31-235.48
ALP (U/L)	177.57	341.40	248.98	236.04	291.70	22.52-474.35
BUN (mg/dL)	29.72	40.83	35.54	28.56	33.11	10.81-34.74
LDH (U/L)	721.07	849.91	781.32	900.02	991.22	157.41-899.72

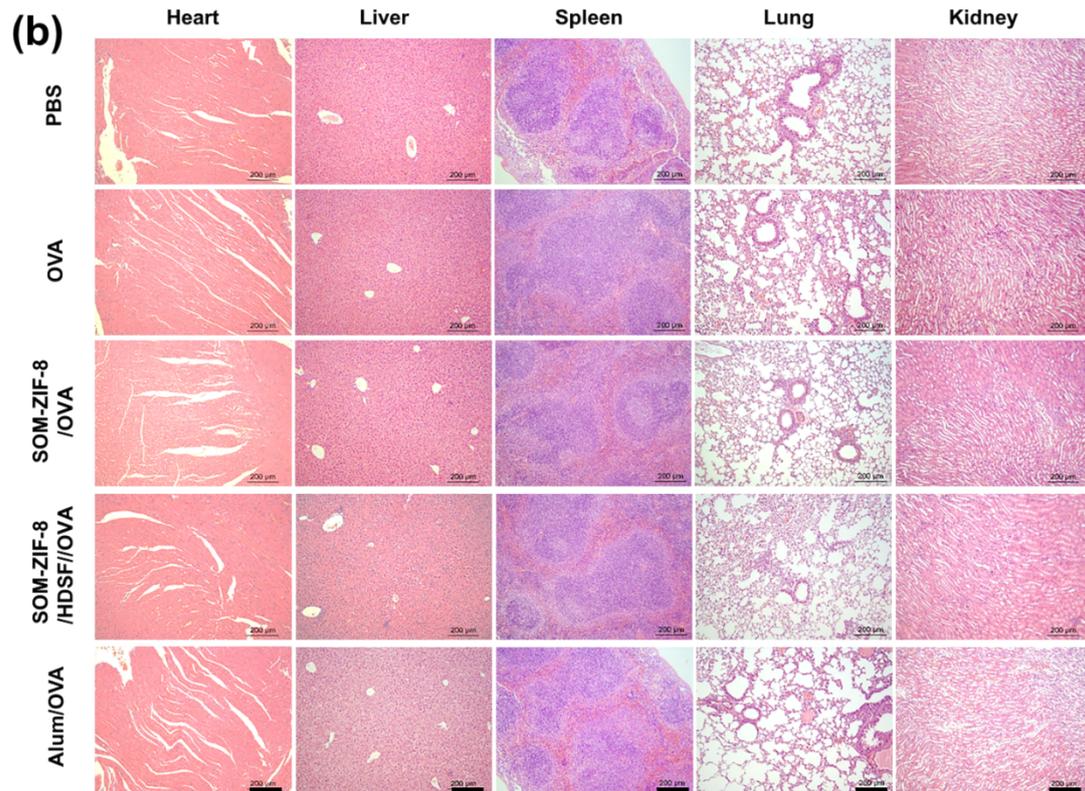


Figure S7. Potential toxicity of SOM-ZIF-8 in vitro and vivo. (a) The cytotoxicity of SOM-ZIF-8 against DC2.4 for 24h. (b) Level of serum biochemical indicators of vaccinated mice on day 7 after the third immunization. (c) Histological sections of heart, liver, spleen lung and kidneys of the vaccinated mice on day 7 after the third immunization. The scale bar is 200 µm. Data are represented as means \pm SEM (n = 4).