

Supplementary Information

Hybrid nanovaccine for co-delivery of mRNA antigen and adjuvant

Jingnan Yang^{1#}, Smriti Arya^{2#}, Pingsai Lung¹, Qiubin Lin², Jiandong Huang^{2*}, Quan Li^{1*}

Table SI1 All DLS results are summarized.

Formulation	Size (nm)	PDI	ζ-potential (mV)
PLGA	195.2 ± 2.3	0.174 ± 0.027	-20.1 ± 0.8
PLGA@lipid	307.1 ± 6.8	0.160 ± 0.028	32.7 ± 0.4
Hybrid-mRNA	448.6 ± 11.8	0.166 ± 0.048	20.6 ± 1.4
Gardiquimod-loaded PLGA	204.3 ± 1.5	0.067 ± 0.023	- 22.2 ± 0.5
Gardiquimod-loaded PLGA@lipid	348.7 ± 3.9	0.191 ± 0.029	31.5 ± 0.9
Gardiquimod-loaded hybrid-mRNA	493.8 ± 1.5	0.245 ± 0.016	21.2 ± 2.0

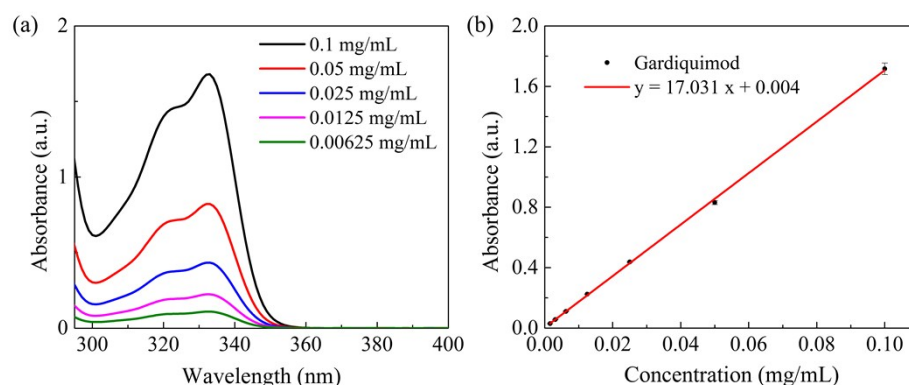


Figure SI1 (a) The absorption spectrum of gardiquimod in DMSO at different concentrations; (b) standard equation of gardiquimod at 333 nm and its linear fitting.

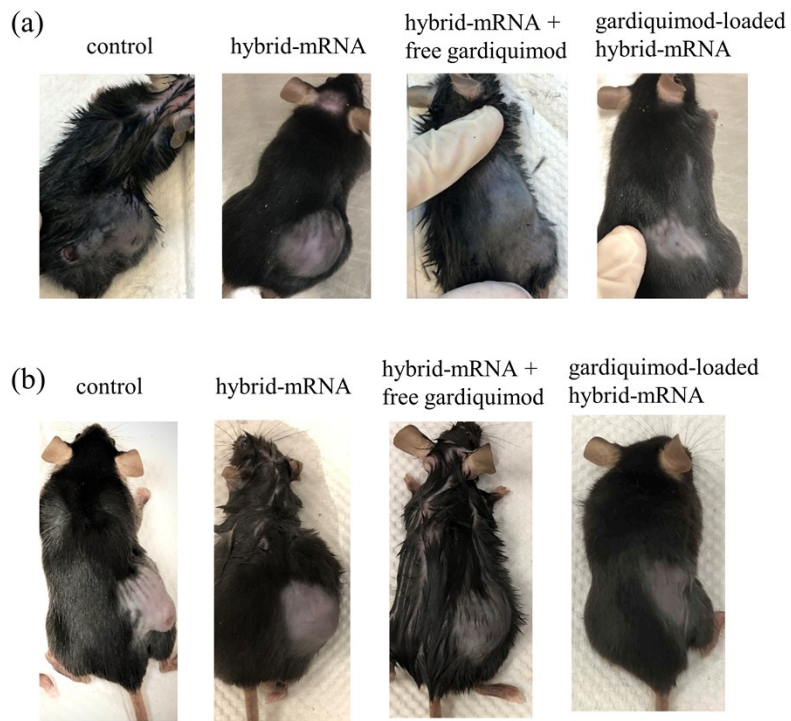


Figure SI2 Representative tumor images in (a) therapeutic model and (b) protective model collected at day 28 and day 26 respectively from tumor inoculation.