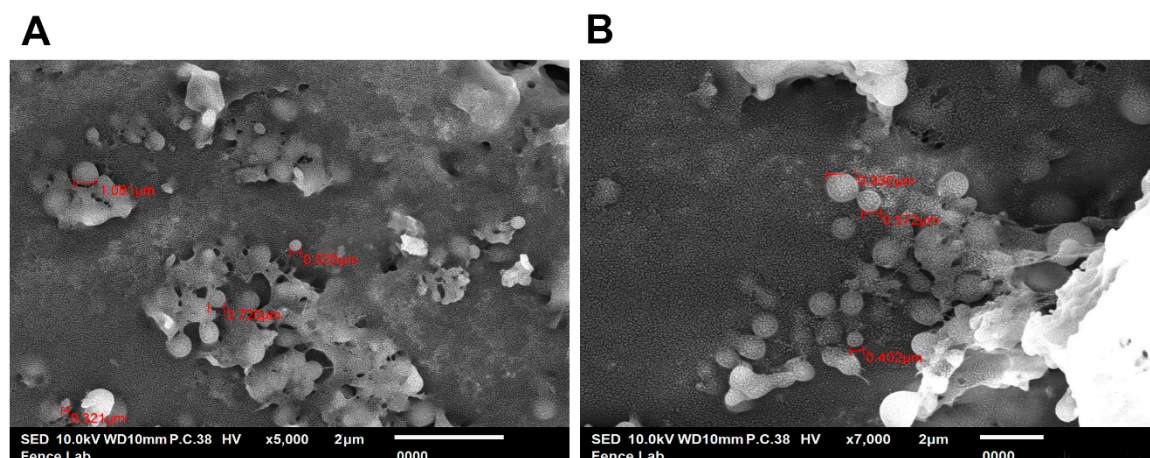


# Supplementary Figure S1:



**Figure S1** Scanning electron microscopic images of PLGA NPs at different concentrations of PVA. The scale bar is 2  $\mu$ m.

**Notes:** (A) 1 % PVA. (B) 4 % PVA.

**Abbreviations:** NPs, nanoparticles; PVA, polyvinyl alcohol.

**Supplementary Table S1.** Nature and composition of the different materials injected into ICR mice to evaluate the type of immune response.

Groups	Inoculations	Injection at Day 0	Purpose
1	PBS	1	Blank control
2	pET-32a	1	Negative control
3	PLGA NPs	1	To compare PLGA NPs
4	rHcES-15	1	To determine immunogenicity of rHcES-15
5	rHcES-15+PLGA	1	To determine immunogenicity of rHcES-15 with the adjuvant activity of PLGA NPs