

Supporting information

Development of polyelectrolyte complexes for the delivery of peptide-based subunit vaccines against group A streptococcus

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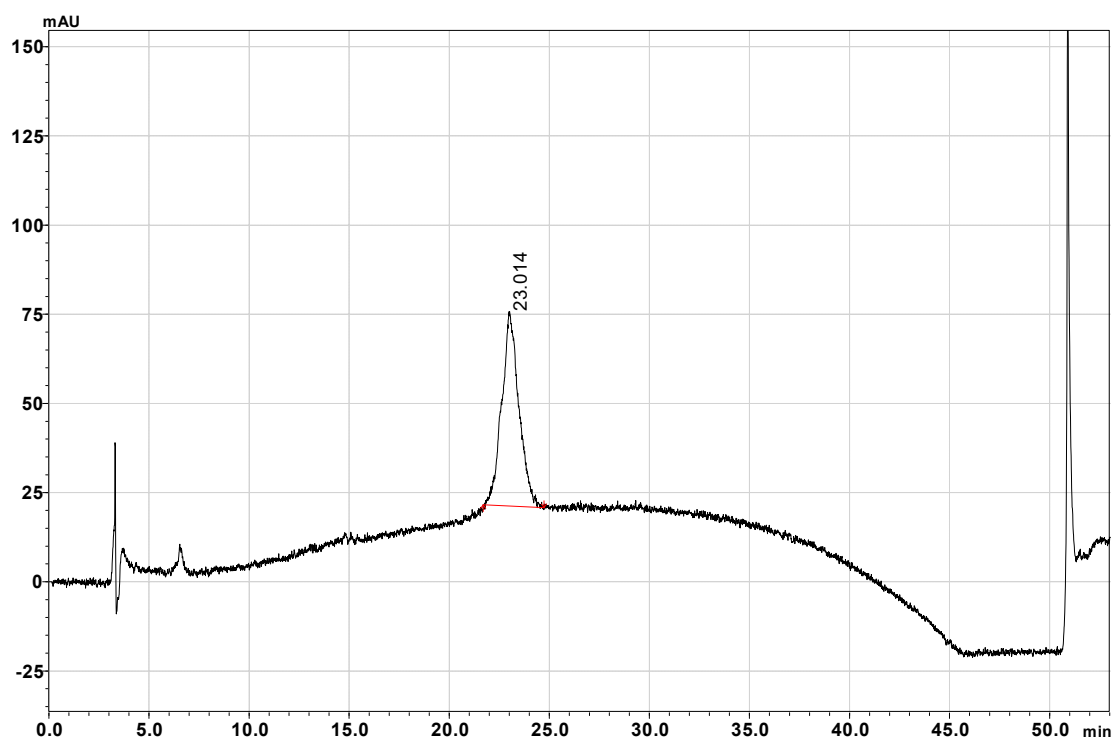


Figure S1. Analytical HPLC profile of LCP-1. $t_R=23.0$ min

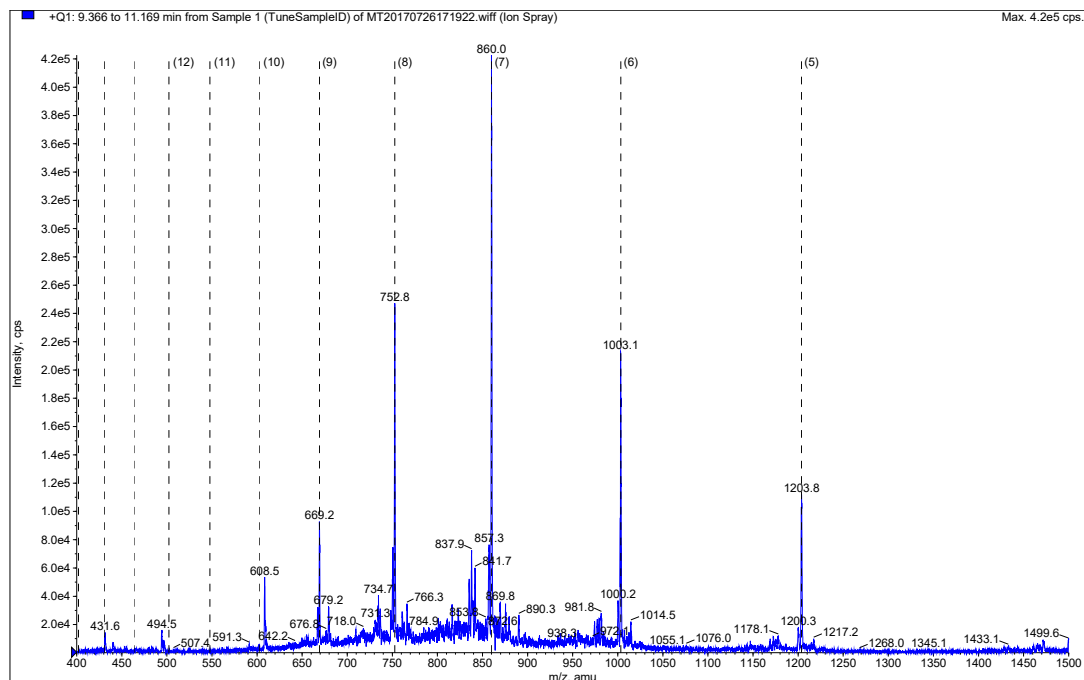
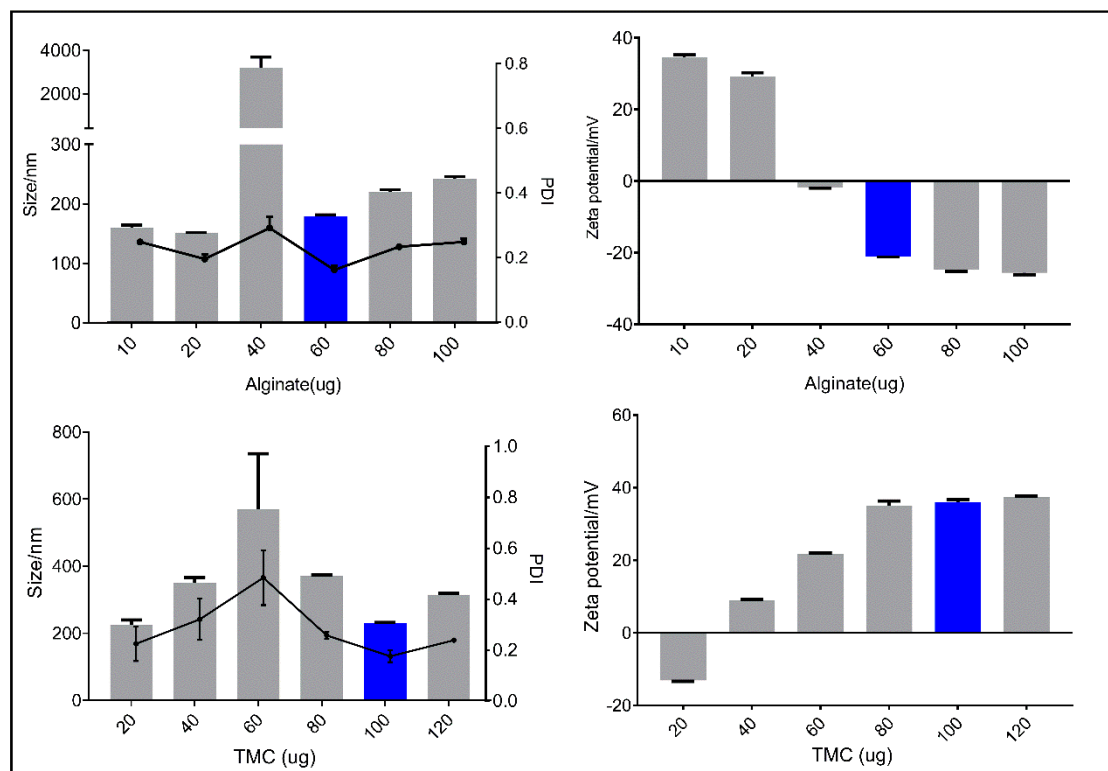
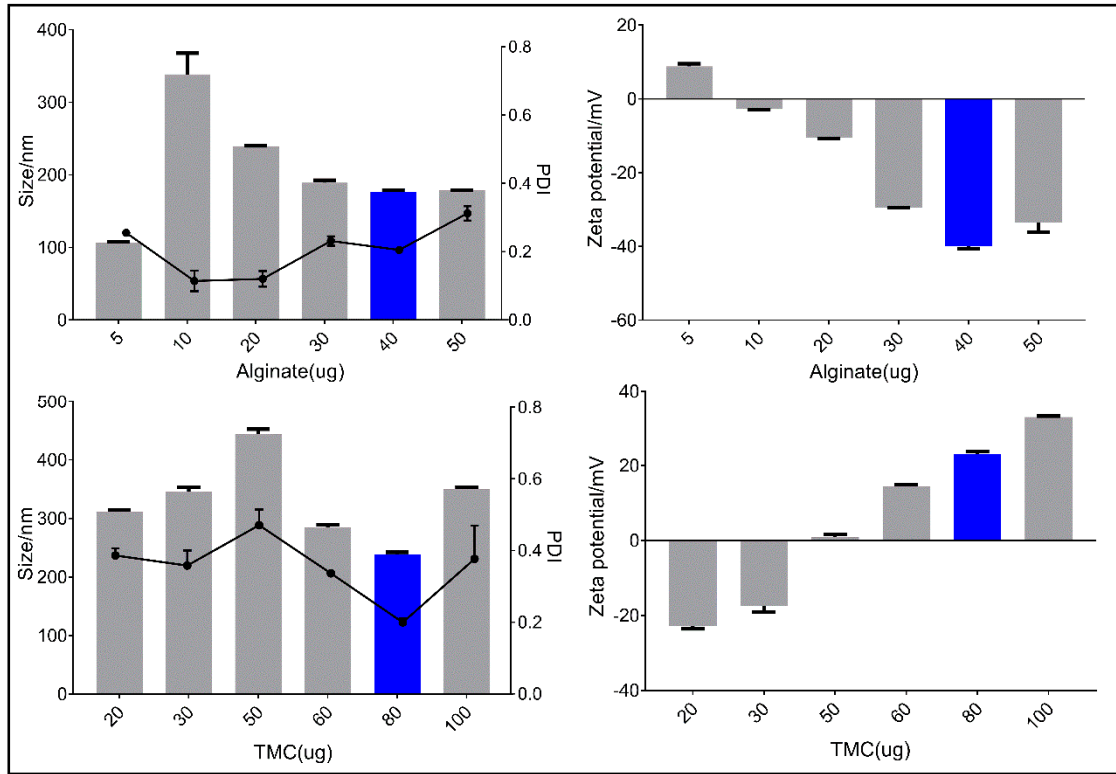


Figure S2. Mass spectrum of LCP-1. ESI-MS: m/z 1203.8 (calculated 1203.8) $[M+5H]^{5+}$; 1003.1 (calculated 1003.4) $[M+6H]^{6+}$; 860.0 (calculated 860.2) $[M+7H]^{7+}$; 752.8 (calculated 752.8) $[M+8H]^{8+}$; 669.2 (calculated 669.2) $[M+9H]^{9+}$

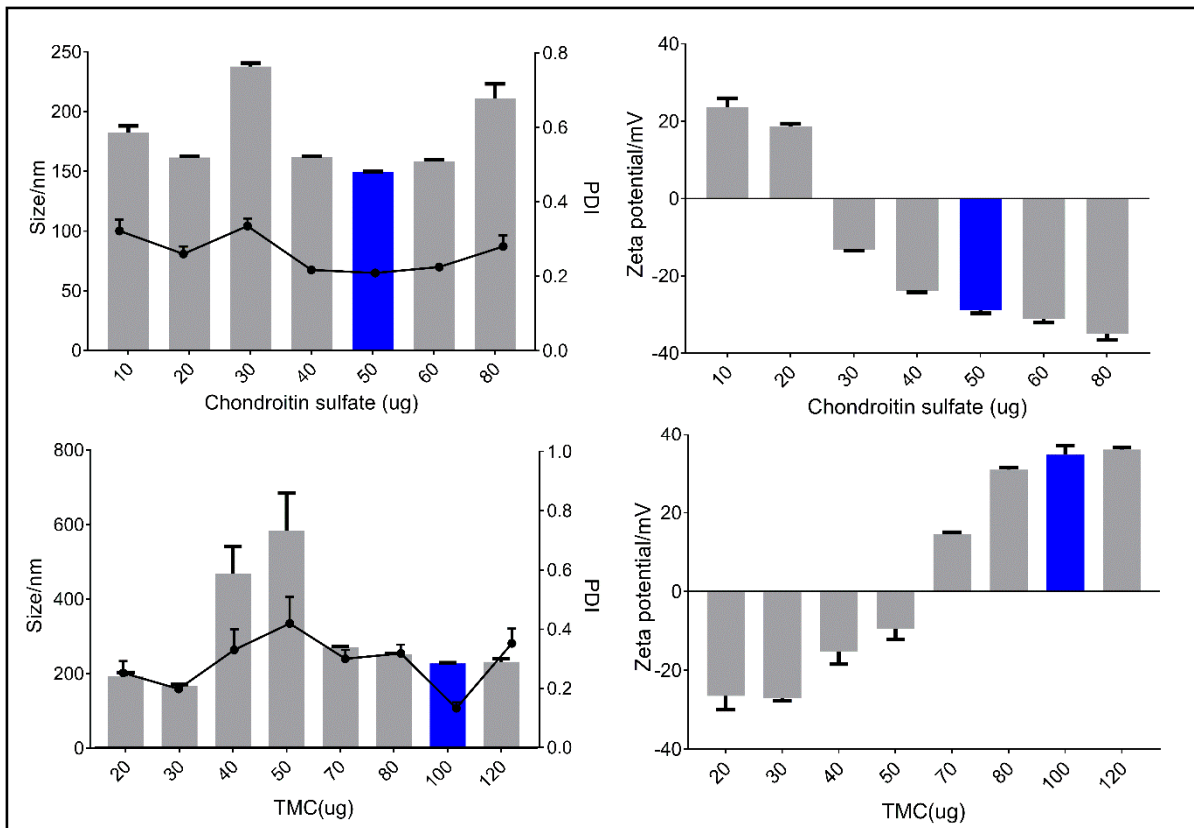
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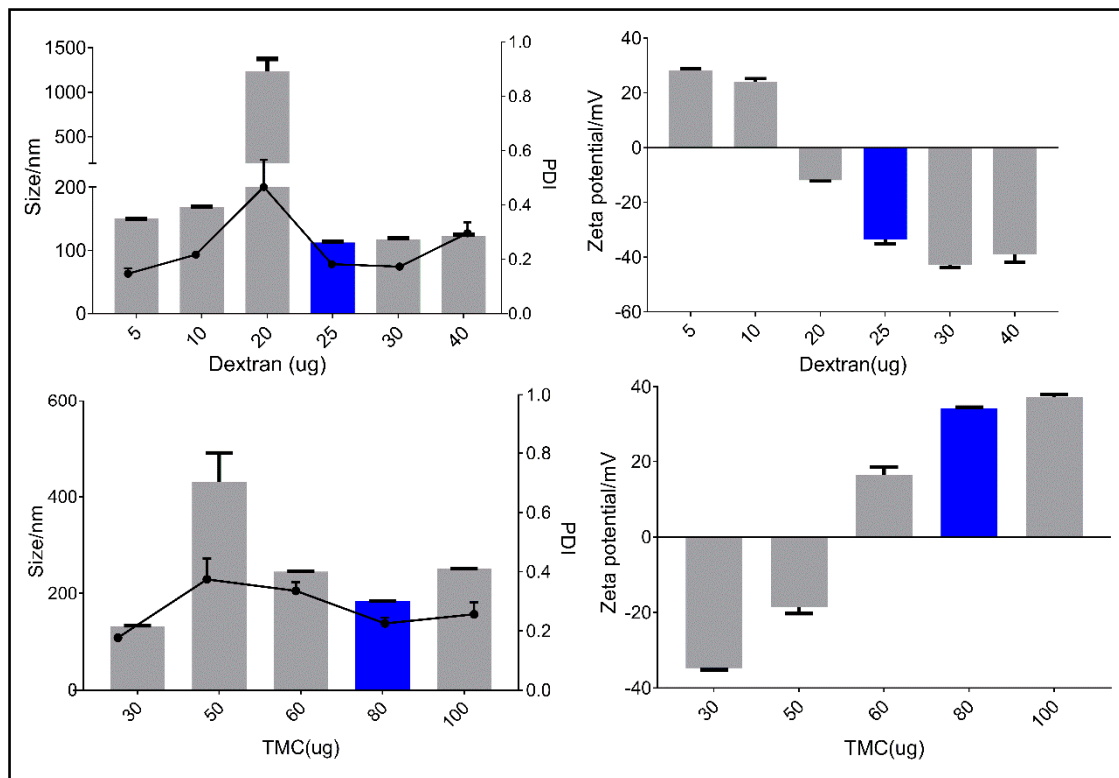
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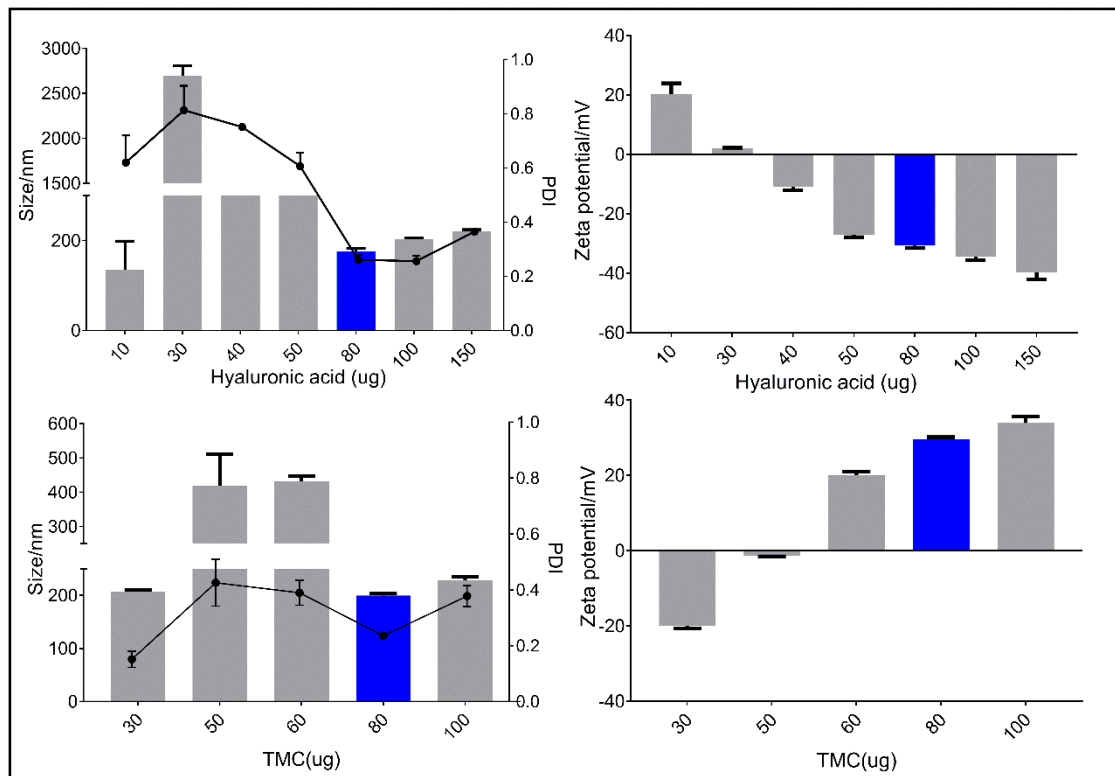
c)



d)



e)



f)

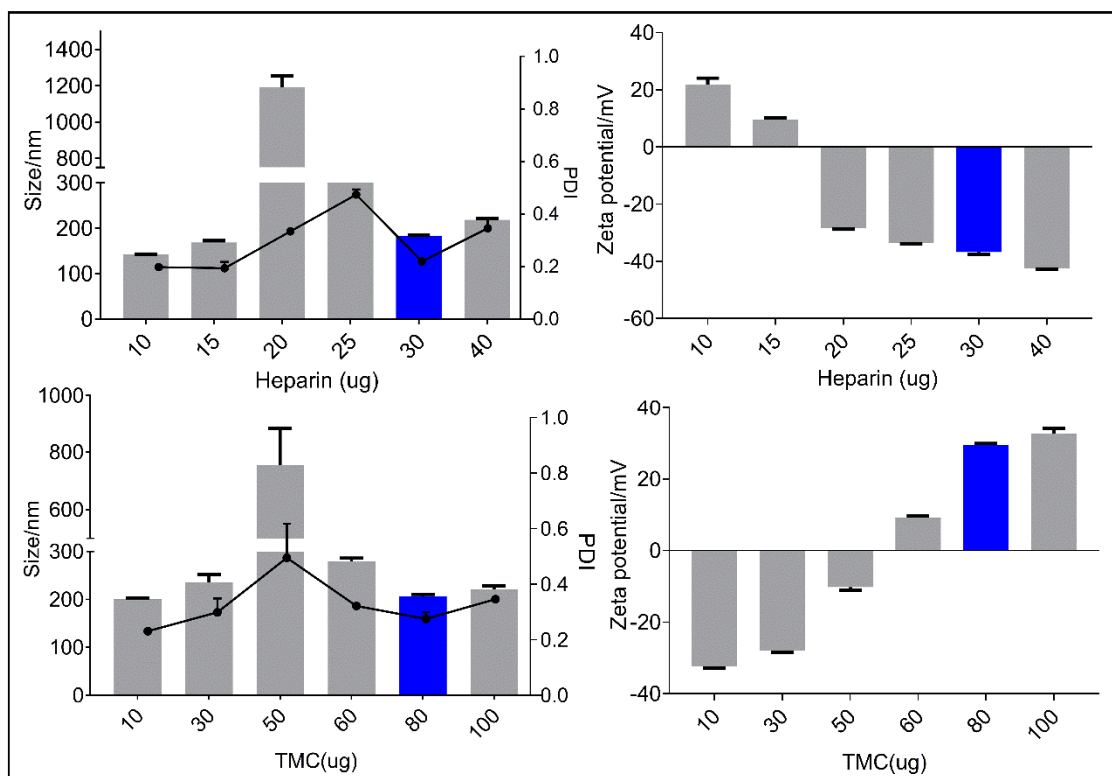


Figure S3. The optimization of formulation monitored with DLS. In each panel, the top two graphs represented the optimization of negative polymer mixing ratios (a, Lip-1; b, PEC-1; c, PEC-2; d, PEC-3; e, PEC-4; f, PEC-5) while the bottom two graphs represented the optimization of TMC coating. The optimum amount of each polymer required was marked in blue column.

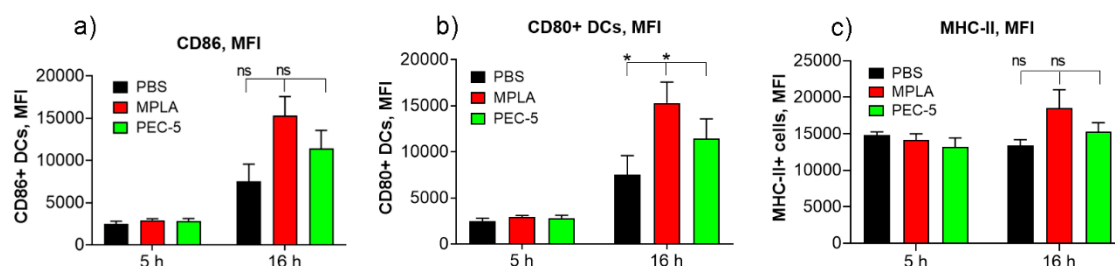


Figure S4. PEC-5 induced maturation of splenocyte-derived DCs. DCs were cultured with PEC-5 for 5 h and 16 h separately. Expression levels of CD 86 (a), CD 80 (b) and MHC-II (c) were measured by flow cytometry. Results are mean fluorescence intensity (MFI) \pm SEM (n= 2). * $p<0.05$, ** $p<0.01$ and *** $p<0.001$.

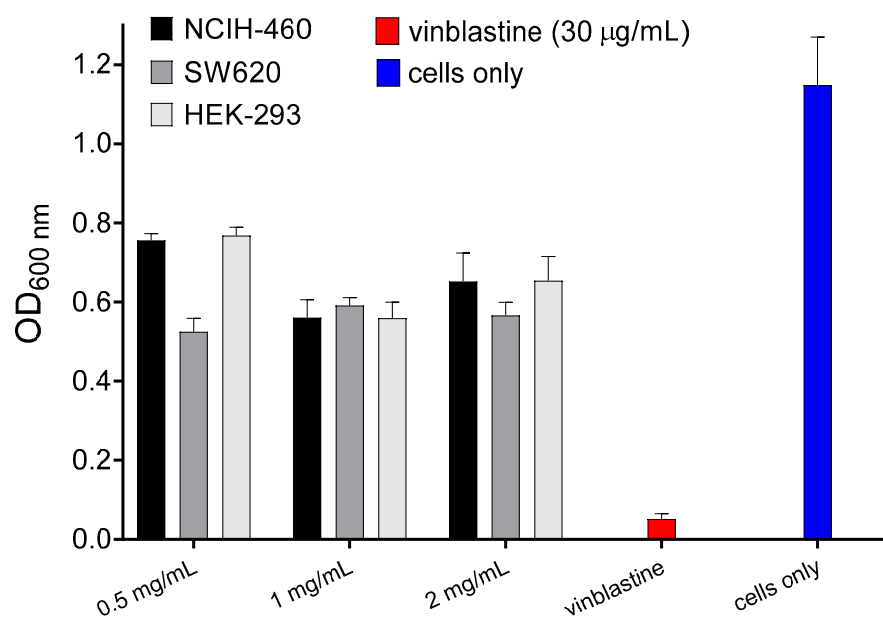


Figure S5. The viability of cells treated with PEC-5. NCIH-460: human lung cancer cell line, SW620: human colorectal cancer cell line, HEK293: human kidney cell line. After 68 h incubation, cell viability was measured with MTT assay. All values are reported as means \pm SEM with duplicate data points.