Supporting information

Co-delivery of 5-fluorocytosine and cytosine deaminase into glioma cells mediated by an intracellular environment-responsive nanovesicle

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**Fig. S1** GPC curves of PAsp(DIP/MEA)-COOH and PEI-PAsp(DIP/MEA) in DMF containing LiBr (1g/L) at a flow rate of 1.0 mL/min.

<table>
<thead>
<tr>
<th>Name</th>
<th>M&lt;sub&gt;NNMR&lt;/sub&gt;/kDa</th>
<th>M&lt;sub&gt;n&lt;/sub&gt;/kDa</th>
<th>Polydispersity</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAsp(DIP/MEA)-COOH</td>
<td>10.9</td>
<td>12.2</td>
<td>1.47</td>
</tr>
<tr>
<td>PEI-PAsp(DIP/MEA)</td>
<td>11.5</td>
<td>13.3</td>
<td>1.49</td>
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</table>
Fig. S2 Raman spectrum of the vesicle based on PEI-PAsp(DIP/MEA) clearly showing the formation of disulfide bonds.
Fig. S3 Viability of C6 cells in the presence of nanocomplexes encapsulating single therapeutic agent in comparison with empty carrier. Data are presented as mean±SE (n=3).
**Fig. S4** The percentage of apoptotic cells quantified by Annexin-V-FITC and PI flow cytometry (Q1: necrotic cells; Q2: late apoptotic cells; Q3: normal viable cells; Q4: early apoptotic cells.). Images show cells incubated with: PPDM, PPDM/5-FC, PPDM/pCMVCD, PPDM/5-FC/pCMVCD, respectively. Data are given as mean ± SE (n=3).