## **Supporting Information**

## Tumor Microenvironment-Regulated Redox-Responsive Cationic Galactose-based Hyperbranched Polymers for siRNA Delivery.

Yi-Yang Peng<sup>†‡</sup>, Diana Diaz-Dussan<sup>†‡</sup>, Piyush Kumar<sup>∏</sup> and Ravin Narain<sup>†\*</sup>.

†Department of Chemical & Materials Engineering, University of Alberta, Edmonton T6G 1H9, Alberta, Canada.

<sup>17</sup>Department of Oncology, University of Alberta, Cross Cancer Institute, Edmonton, T6G 1Z2, Alberta, Canada

‡Author contributions: These authors contributed equally to this work.

## **AUTHOR INFORMATION**

## **Corresponding Author**

\* E-mail: <u>narain@ualberta.ca</u>. Tel: (780) 492-1736.

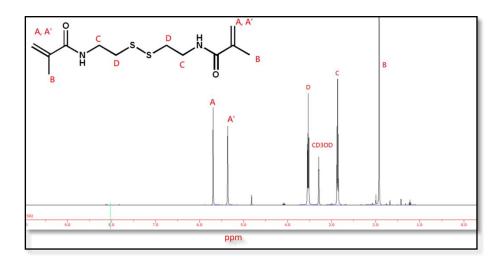


Figure S1. <sup>1</sup>H NMR spectrum of N,N'-bis(methacryloyl)cystamine (BMAC) in CD<sub>3</sub>OD.

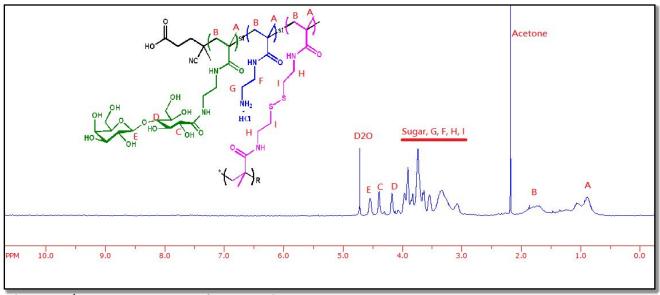


Figure S2.<sup>1</sup>H NMR spectrum of HRRP 2 in D<sub>2</sub>O.

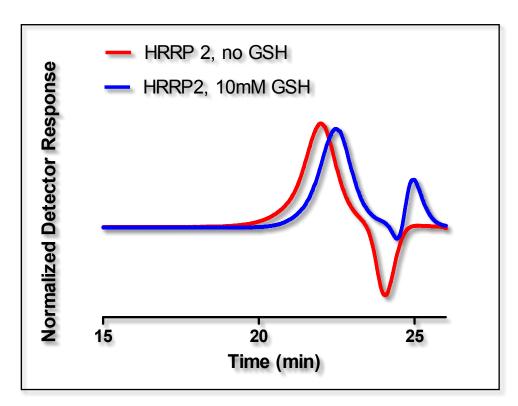


Figure S3. GPC spectrum of HRRP 2 before and after incubation with 10mM GSH.

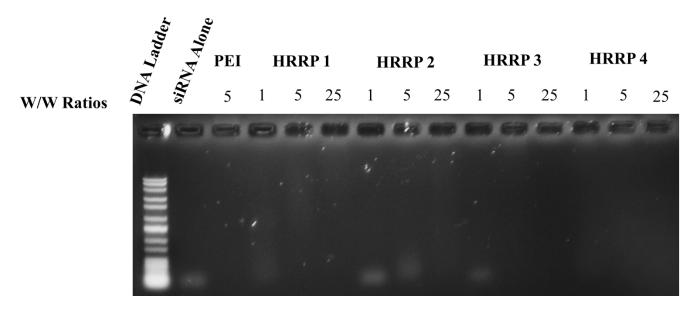


Figure S4. Agarose gel electrophoresis illustrating siRNA complexation at different weight/weight ratios (w/w ratio) of redox-responsive and cationic galactose-based hyperbranched polymers with 133ng control siRNA.

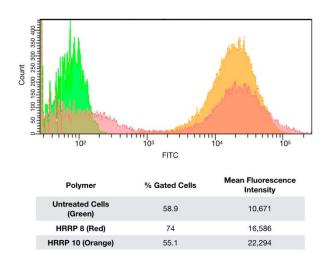


Figure S5. Flow cytometry results of cellular internalization of FITC-labeled polyplexed (HRRP 2[Red] and HRRP 4[Orange]) in comparison to untreated Cells (Green).