Synthesis and Characterization of Alkylated Poly(1-vinylimidazole) to Control the Stability of its DNA Polyion Complexes for Gene Delivery

Shoichiro Asayama,* Tomoe Hakamatani, and Hiroyoshi Kawakami

Department of Applied Chemistry, Tokyo Metropolitan University, 1-1 Minami-Osawa, Hachioji, Tokyo 192-0397, Japan

*To whom correspondence should be addressed.
E-mail: asayama-shoichiro@c.metro-u.ac.jp.
Figure S-1. Analysis of the formation of the complex between DNA and PVIm-Bu by agarose gel electrophoresis in the absence of EtBr. The PVIm-Bu was labeled with fluorescein. Solid arrowhead indicates the well where each sample was loaded.
Figure S-2. Effect of PVIm-R on the viability of HepG2 cells after 1 day incubation. The concentration of the PVIm-R was adjusted to 1000 µg/mL. Symbols and error bars represent the mean and standard deviation of the measurements made in triplicate wells.
Figure S-3. Release of DNA from PVIm-Bu/DNA complexes by dextran sulfates (DS) as assessed by agarose gel electrophoresis. The DNA mixtures (+/- = 12) with 7, 20 or 40 mol% butylated PVIm (PVIm-Bu) were incubated in the presence of DS. Solid arrowhead indicates the well where each sample was loaded.
Figure S-4. Release of DNA from PVIm-R/DNA complexes by dextran sulfates (DS) as assessed by agarose gel electrophoresis. The DNA mixtures (+/- = 12) with 20 mol% methylated PVIm (PVIm-Me), 20 mol% ethylated PVIm (PVIm-Et) or 20 mol% butylated PVIm (PVIm-Bu) were incubated in the presence of DS. Solid arrowhead indicates the well where each sample was loaded.