Effective CpG DNA delivery using amphiphilic cycloamylose nanogels

Y. Tahara, J. Yasuoka, S. Sawada, Y. Sasaki and K. Akiyoshi

Department of Polymer Chemistry, Graduate School of Engineering, Kyoto University, Katsura, Nishikyo-ku, Kyoto 615-8510, Japan.

ERATO Bio-nanotransporter Project, Japan Science and Technology Agency (JST), Kyoto University, Katsura, Nishikyo-ku, Kyoto 615-8510, Japan.

Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University, 2-3-10 Kanda-Surugadai, Chiyoda-ku, Tokyo 101-0062, Japan.

These authors contributed equally to this work.

*Corresponding author: Kazunari Akiyoshi, Department of Polymer Chemistry, Graduate School of Engineering, Kyoto University, Katsura, Nishikyo-ku, Kyoto 615-8510, Japan. Tel: +81-75-383-2589; Fax: +81-75-383-2590. E-mail: akiyoshi@bio.polym.kyoto-u.ac.jp.
**Fig. S1** (A) Cytotoxicity of J744A.1 cells using PEI/CpG, CHP-DEAE/CpG and CH-CA-DEAE/CpG complexes and (B) IL-12 secretion of J744A.1 cells induced by native CpG DNA complexed with PEI, CHP-DEAE, CA-DEAE or CH-CA-DEAE nanogels.

**Fig. S2** Complex formation of native CpG DNA with CA-DEAE or CH-CA-DEAE nanogels after incubation with DNase I confirmed through agarose gel electrophoresis.
**Fig. S3** Particle sizes of complexes of native CpG DNA and PS-CpG DNA with CH-CA-DEAE nanogels (n=3).

**Fig. S4** Intracellular distribution of RAW264.7 cells using the complexes of native CpG DNA and PS-CpG DNA. Scale bars: 20 μm.