Supplementary Materials

Fluorescence tumor-imaging using a thermo-responsive molecule with an emissive aminooquinoline derivative

Takeru Araki 1, Yasufumi Fuchi 2, Shuhei Murayama 3, Ryoma Shiraishi 1, Tokimi Oyama 2, Mariko Aso 1, Ichio Aoki 4, Shigeki Kobayashi 2, Ken-ichi Yamada 1 and Satoru Karasawa 2,5,*

1 Graduate School of Pharmaceutical Sciences, Kyushu University, 3-1-1 Maidashi, Higashi-Ku, Fukuoka 812-8582, Japan; araking417@gmail.com (T.A.); oirawwhitydaze0709@gmail.com (R.S.); aso@phar.kyushu-u.ac.jp (M.A.); kenyamada@phar.kyushu-u.ac.jp (K.Y.)
2 Faculty of Pharmaceutical Sciences, Showa Pharmaceutical University, Machida, Tokyo 194-8543, Japan; fuchi@ac.shoyaku.ac.jp (Y.F.); b14030@ug.shoyaku.ac.jp (T.O.); kobayasi@ac.shoyaku.ac.jp (S.K.)
3 Department of Bioanalytical Chemistry, School of Pharmacy, Showa University, 1-5-8 Hatanodai, Shinagawa-ku, Tokyo 142-8555, Japan; s.murayama@pharm.showa-u.ac.jp
4 Department of Molecular Imaging and Theranostics, National Institute of Radiological Sciences (NIRS), QST, Anagawa 4-9-1, Inage, Chiba 263-8555, Japan; iaoki.jp@gmail.com
5 PRESTO, Japan Science and Technology Agency, Kawaguchi 332-0012, Japan
*
Correspondence: karasawa@ac.shoyaku.ac.jp; Tel.: +81-427-211-553

Table of Contents

1. Synthetic route of TFMAQ-diEg4. S3
2. Copies of 1H NMR spectrum of TFMAQ-diEg4. S4
3. Copies of 1H NMR spectrum of TFMAQ-Eg4. S5
4. Temperature dependence of the fluorescence spectra of TFMAQ-diEg4. S6
5. Illustrations showing the process of controlling the body temperature, in mice. S7

Scheme S1. Synthetic route of the TFMAQ-diEg4.
**Figure S1.** $^1$H NMR spectrum of TFMAQ-diEg4 in CDCl$_3$. Arrow indicates $^1$H of water.

**Figure S2.** $^1$H NMR spectrum of TFMAQ-Eg4 in CDCl$_3$. Arrow indicates $^1$H of water.
Figure S3. Temperature dependence of the fluorescence spectra of TFMAQ-diEg4.

Figure S4. Illustrations showing the process of controlling the body temperature, in mice (a) and (b) indicate the conditions of without and with local heating around tumor tissues, respectively.