

**Supplementary Table 1. Physicochemical properties of Fuc-liposome sorafenib.**

Fucose concentration in conjugating reaction ( $\mu\text{g/mL}$ )	0 (F0)	25 (F25)	50 (F50)
Lipid concentration (mg/mL) <sup>a</sup>	37.2	37.7	36.3
Particle size (nm) <sup>b</sup>	121	120	116
z potential (mV) <sup>c</sup>	-79	-82	-84
sorafenib concentration (mM) <sup>d</sup>	1.1	1.1	0.9
sorafenib encapsulation efficiency (%) <sup>e</sup>	5.0	5.0	5.0
sorafenib to lipid weight ratio <sup>f</sup>	0.025	0.025	0.025

<sup>a</sup> Total cholesterol was measured using a Cholesterol E-test Wako Kit.

<sup>b</sup> Encapsulation of Sorafenib into liposomes followed by conversion into Sorafenib 0 in TAPS buffer containing NaCl

<sup>c</sup> Determined with a Malvern Nano-S90.

<sup>d</sup> The amount of Sorafenib was measured by spectrophotometer

<sup>e</sup> Encapsulation efficiency was calculated by the following formula:

$$\text{Amount of Sorafenib in liposomes/Initial amount of chemicals} \times 100$$

<sup>f</sup> Sorafenib:lipid weight ratio was calculated by following formula:

$$\text{Sorafenib concentration (mg/mL)/lipid concentration (mg/mL)}.$$