Supplemental data

A novel role for α-tocopherol transfer protein (α-TTP) in protecting against chloroquine toxicity

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Running title: *α-TTP function in chloroquine toxicity*

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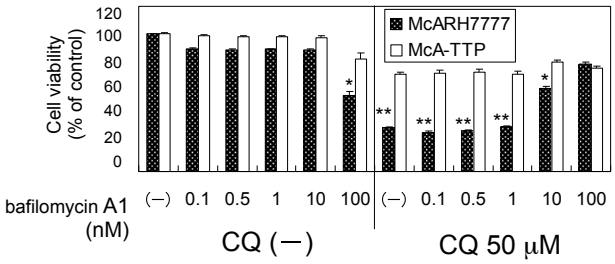
Supplemental figure legends

Supplemental Fig. S1. Bafilomycin A1 inhibits chloroquine-induced cell death.
Viabilities of McARH7777 and McA-TTP cells were measured 36 h following treatment with bafilomycin A1 with or without 50 μM chloroquine. Cells were pre-treated with bafilomycin A1 for 45 min before addition of 50 μM chloroquine to each cell. Bafilomycin A1 dose-dependently inhibited chloroquine toxicity was observed in McARH7777 cells. Data represent means ± SD. $^{*}p<0.0025$, $^{**}p<0.0001$, compared with McA-TTP cells which were treated with the same dose of bafilomycin A1 (unpaired t-test).

Supplemental Fig. S2. CQ can not inhibit α-TTP-mediated α-tocopherol transfer.
We used a lipid-protein co-sedimentation assay to examine the inhibitory action of CQ on the α-TTP-mediated α-tocopherol transfer. The liposomes were made from PE/PC=80 μg/20 μg containing [^{3}H] α-tocopherol (5×10^{4} dpm, 1 pmol) and cold α-tocopherol (30 pmol). These liposomes were mixed with 10 μg of α-TTP (330 pmol) which were pre-incubated with 0, 10, 100, 1000 μM (0, 1, 10, 100 nmol) of CQ for 10 min. The liposome-protein mixtures were incubated for 15 min at room temperature and ultracentrifuged at 100,000 × g for 20 min. The [^{3}H] α-tocopherol (α-Toc) in the supernatant and the precipitate were measured by a liquid scintillation counter. We found no significant inhibitory effect even in the presence of an excess amount of CQ.

Fig. S1


Cell viability
(% of control)
120
100
80
60
40
20
0
McARH7777
McA-TTP
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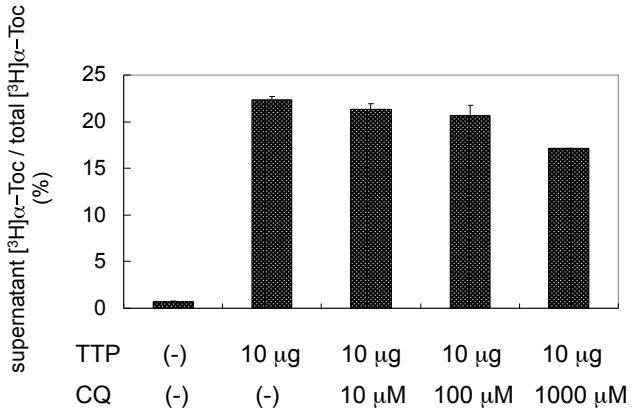
bafilomycin A1
(nM)
(−) 0.1 0.5 1 10 100 (−) 0.1 0.5 1 10 100
CQ (−)
CQ 50 μM

Fig. S2


supernatant [3H]α−Toc / total [3H]α−Toc (%)
25
20
15
10
5
0
TTP (-) 10 μg 10 μg 10 μg 10 μg
CQ (-) (-) 10 μM 100 μM 1000 μM