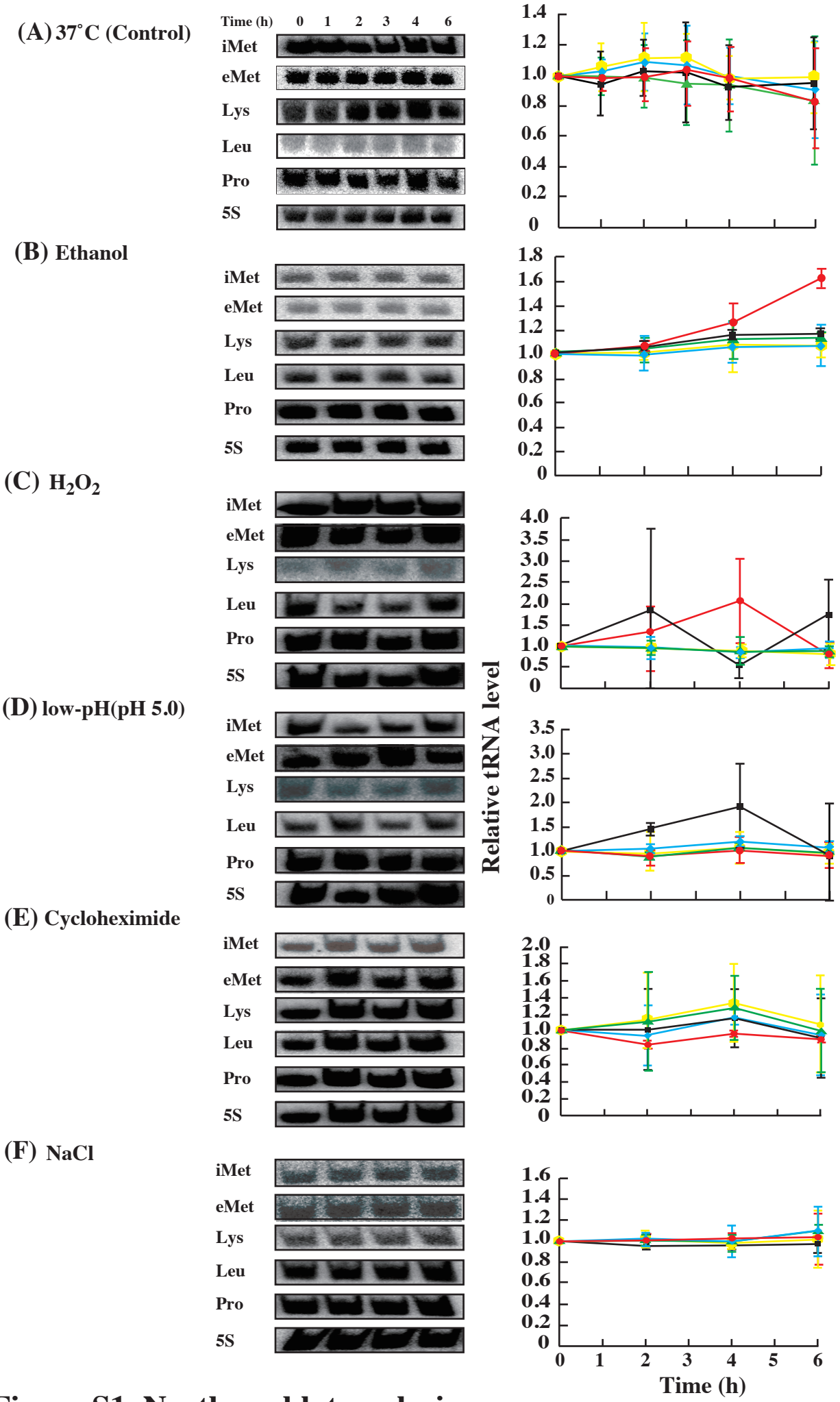

Figure S1, Northern blot analysis

The HeLa cells were treated with ethanol, hydrogen peroxide, low-pH, cycloheximide, or high concentration of NaCl.

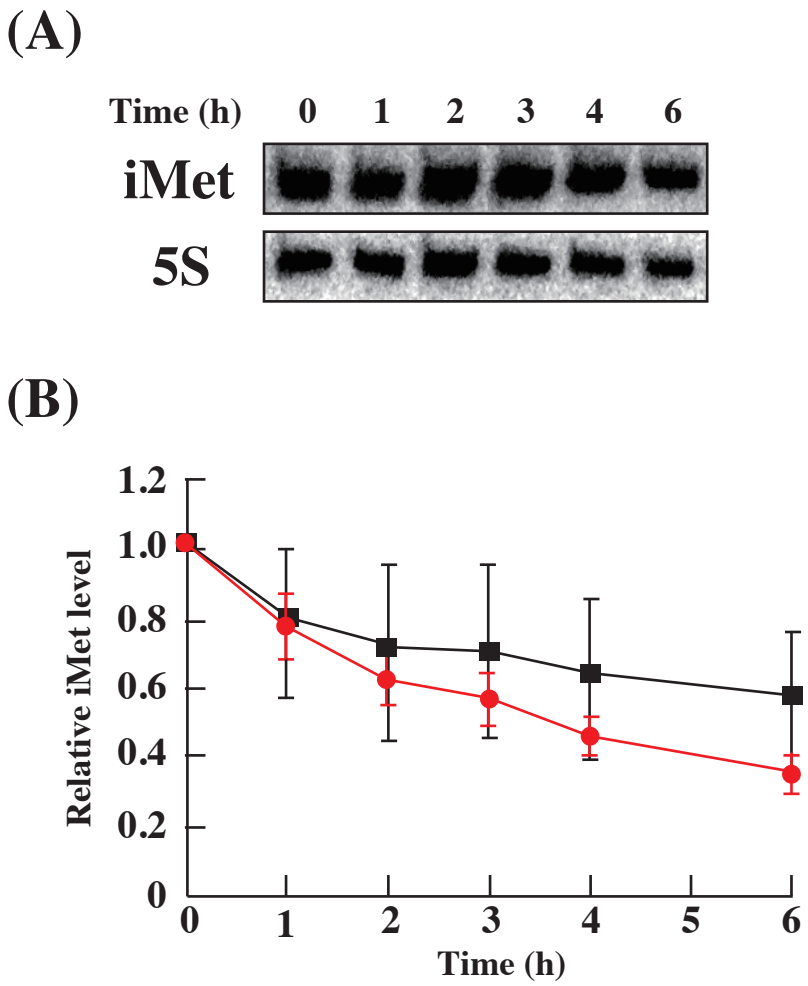

Figure S2, Degradation of tRNA(iMet) in HeLa cells with or without RNA polymerase III inhibitor

(A) Expression levels of tRNA(iMet) and 5S rRNA were evaluated in the presence of RNA polymerase III inhibitor during heat stress by northern bolot analysis. (B) Degradation profile of tRNA(iMet) in the absence (black) or presence (left) of RNA polymerase III inhibitor. 5S rRNA was used as a control. 5S rRNA was used as a control. Data represent the mean ± SD for three independent expriments.

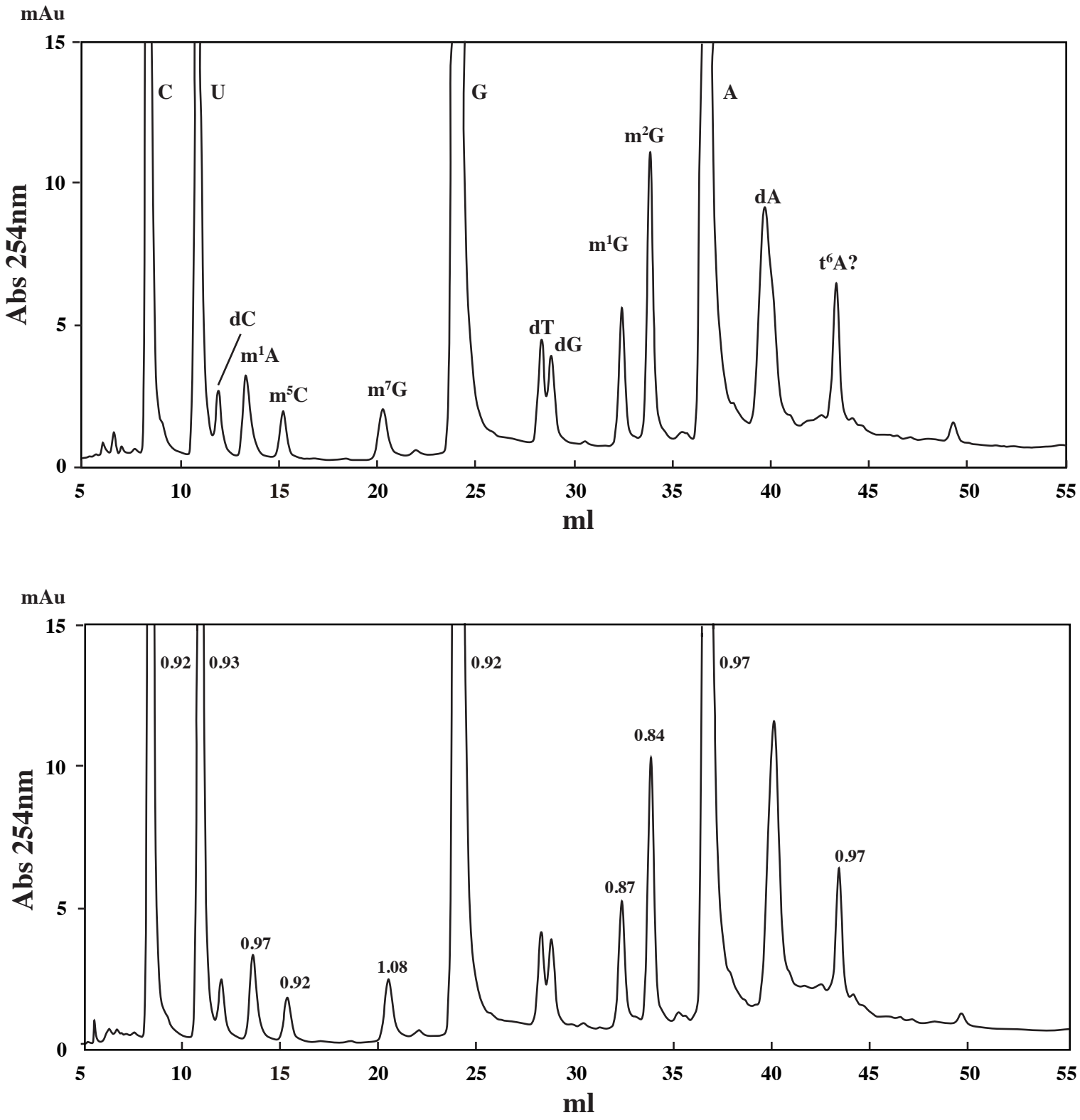

Figure S3, Analysis of nucleoside by HPLC

Cells were normal condition or treated at 43˚C. The modified nucleosides in iMet from normal condition (upper) or heat treated condition (lower). The ratio of modified nucleoside was calculated from the peak area: the peak area in the normal condition was expressed as 1.0. dA, dT, dC, dG were derived oligo probe.

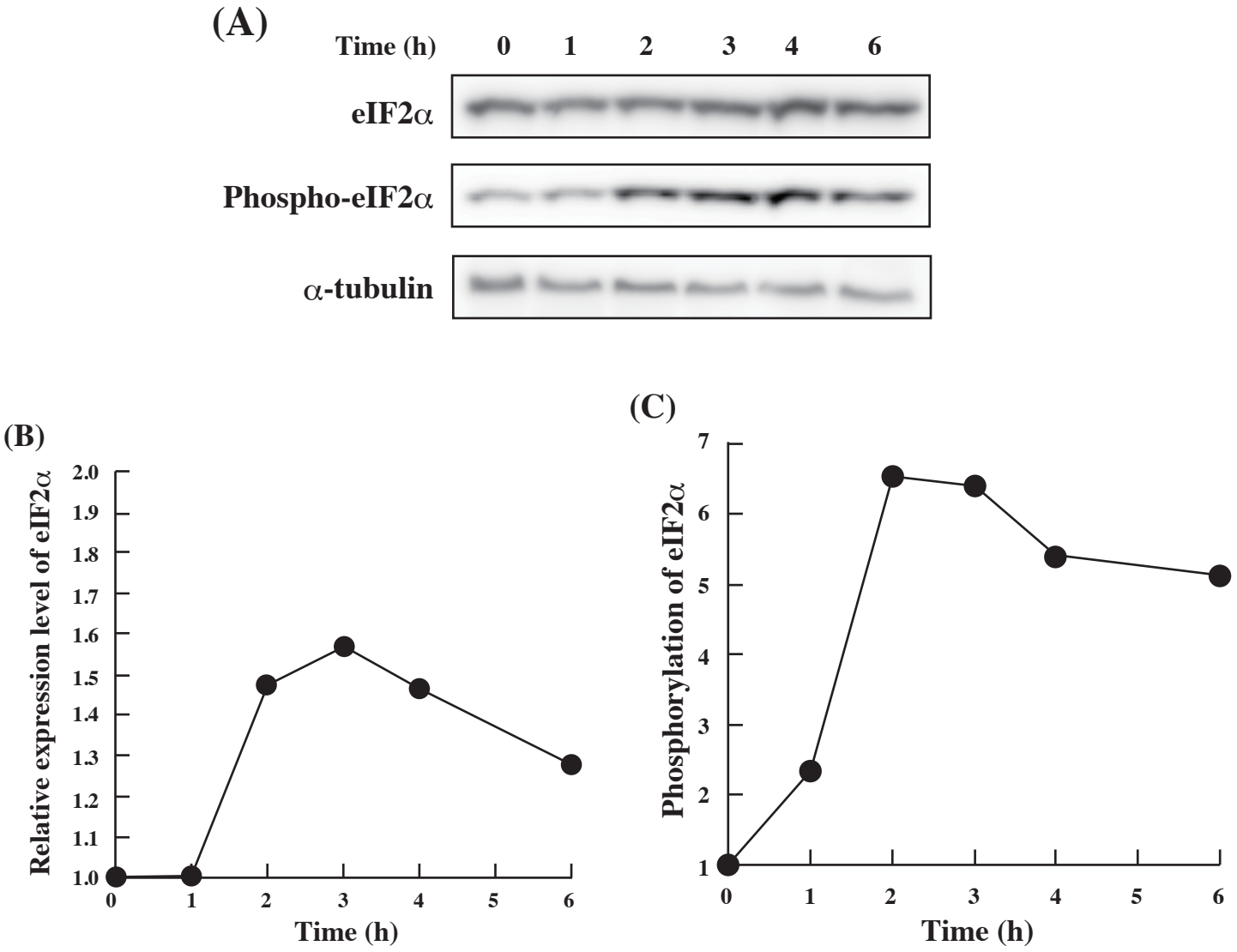

Figure S4, Expression level and Phosphorylation level of eIF2α during heat stress.

HeLa cells were treated at 43˚C for 0-6 h. (A) eIF2α, Phosphorylation of eIF2α, and α-tubulin were detected by western blotting analysis, using specific antibody. (B) Expression level of eIF2α was normalized by the expression level of α-tubulin. The band intesinty by western blot analysis was measured by Multi Gaguge Program (Fujifilm). (C) Phosphorylation level of eIF2α by heat-shock was normalized by the expression level of α-tubulin.

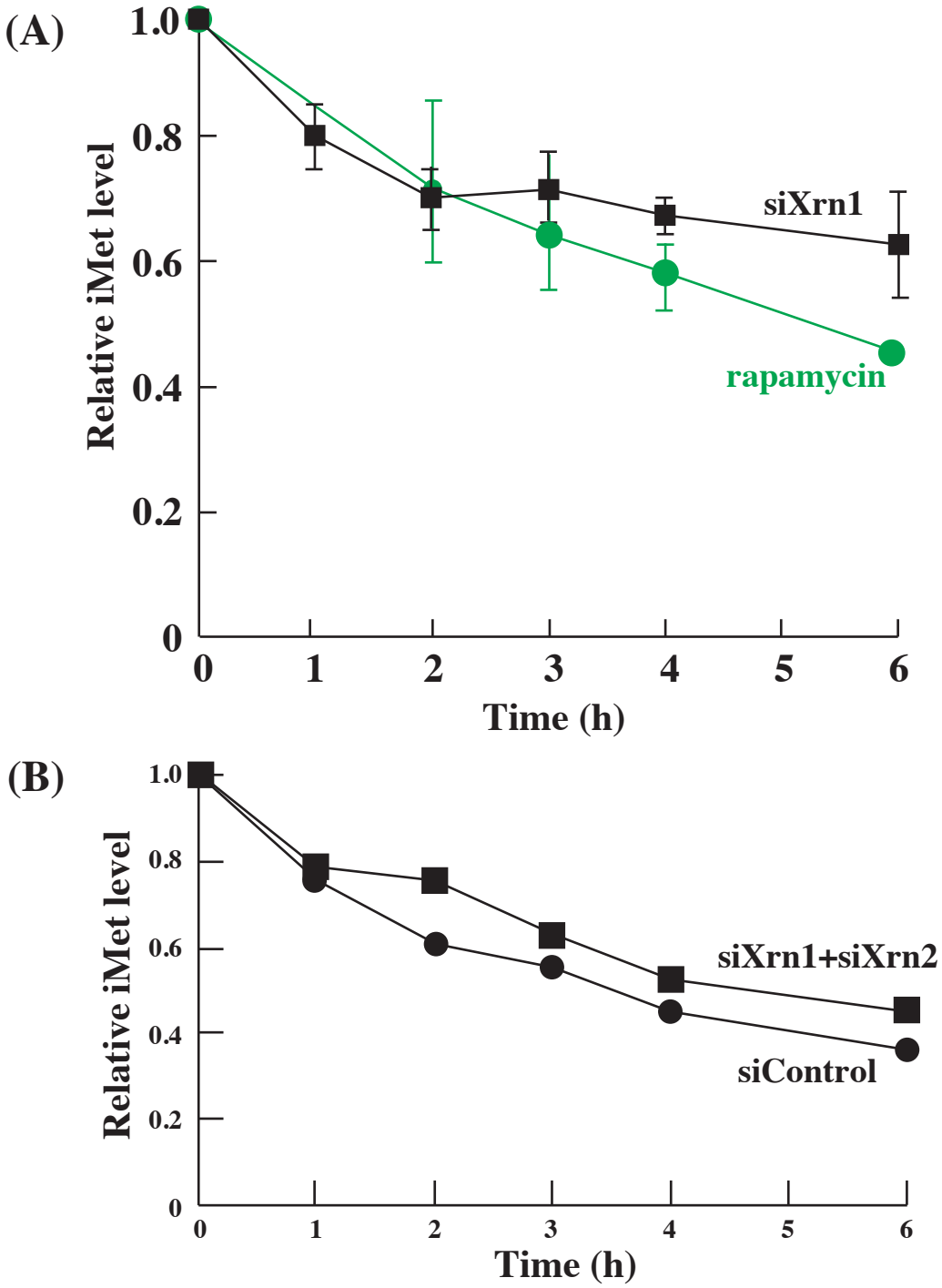

Figure S5 Superposion of degradation profile.

(A) Degradation profile of tRNA(iMet) was shown. The circles were degradation profile under the heat stress in the presence of rapamycin. The squares were shown under the heat stress-induced HeLa cells treated siXrn1. (B) The circles were shown under the heat stress treated siControl. The squares were shown that degradation profile of Meti was added in the HeLa cells treated siXrn1 and siXrn2.