Roles of heat shock protein 90 and its four domains (N, LR, M and C) in calcium oxalate stone-forming processes

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Supplementary Figure S1: Analysis of crystal type by Fourier-transform infrared (FT-IR) spectroscopy. The dried crystals were analyzed under the Nicolet 6700 FT-IR spectroscope equipped with an attenuated total reflectance (ATR) accessory and OMNIC software version 8.3 (Thermo Scientific Inc.; Waltham, MA). Sample spectra were acquired from 4000-600 cm⁻¹ range with a resolution of 4 cm⁻¹ per each spectrum. (A): Sample spectrum was matched with the reference FT-IR spectra in the “Kidney Stone Library – Basic” database. At the O-H stretching region (3600-2800 cm⁻¹), the sample spectrum showed 5 distinct peaks identical to those of the reference COM spectrum, whereas the reference COD spectrum showed a single broad spectrum within this region. (B): The sample spectrum was overlaid with the reference COM and COD spectra.

Supplementary Figure S2: Number and size of COM crystals after crystallization. COM crystallization was performed as described in “Materials and Methods”, and crystal number and size were monitored under the inverted phase-contrast light microscope. (A): Fixed-field micrographs of the COM crystals at each time-point. (B): Number of the crystals was counted from at least 10 random fields per sample for each time-point. (C): Crystal sizes were measured from all crystals in at least 10 random fields per each time-point using NIS Element D software version 4.11 (Nikon). All quantitative data are presented as mean ± SEM.
Fig. S1

A

Reference COM

Reference COD

Sample spectrum

B

Reference COM

Reference COD

Sample spectra
Fig. S2

A

Crystal size (μm²) vs. Time-point (min)

B

Crystal number (field) vs. Time-point (min)

C

Crystal size (μm²) vs. Time-point (min)