

## Supplemental Figure Legends

**Figure S1.** The measurement of mRNA levels of CerS1 and CerS6, and ceramide levels after siRNA transfections. **(A-B)** UM-SCC-22A cells were transfected with non-targeting (Scr), CerS1, or CerS6 siRNAs (50 nM, 48 hr) and mRNA levels were measured by quantitative real-time PCR. Bars represent means  $\pm$  SD from three experiments and \* represents  $p < 0.05$ . **(C-D)** UM-SCC-22A cells were transfected with either non-targeting (Scr) or CerS6 siRNAs (50 nM) for 48 hr and cellular ceramide levels were measured by LC/MS. Bars represent means  $\pm$  SD from three experiments and \* represents  $p < 0.05$ . **(E-F)** UM-SCC-22A cells expressing CerS1 under a Tet-inducible promoter were non-induced (-Tet) or induced (+Tet) for 48 hr, and then their roles in the generation of ceramides were measured by LC/MS. Error bars represent means  $\pm$  SD from two experiments done in duplicates and \* represents  $p < 0.05$ .

**Figure S2.** Roles of overexpression of CerS2 or CerS6 in the regulation of endogenous ceramides. **(A-B)** UM-SCC-22A cells were transfected with Scr or CerS2 siRNA (20 nM) for 48 hr, and **(A)** CerS2 and **(B)** CerS6 mRNA levels were measured by quantitative real-time PCR. **(C-D)** UM-SCC-22A cells expressing CerS6 under a Tet-inducible promoter were induced (+Tet) for 48 hr, and ceramide levels were measured by LC/MS. Untransfected UM-SCC-22A cells (22A) were used as controls. Bars represent means  $\pm$  SD from at least two experiments and \* represents  $p < 0.05$ .