Supplementary Figure Legends

Supplementary Figure S1. (a) Gene expression profiling of 131 clinical specimens for which we have staging information shows that overexpression of PTTG1 correlates with high tumor stage. (b) Similarly, ECT2 overexpression is most prominent in high stage ccRCC tumors. (c) PTTG1 and ECT2 are coordinately overexpressed in primarily high stage tumors. (d) Cells completely deficient of ECT2 acquire a highly-branched and spindle-shaped morphology.

Supplementary Figure S2. (a) SiRNA targeting PTTG1 achieved complete suppression of PTTG1 expression for at least 72 hours. (b) Immunofluorescent staining revealed abundant nuclear and cytoplasmic localization of PTTG1 in 786-O cells and suppression of PTTG1 expression upon treatment with targeted siRNA. (c) A 2-dimensional colony formation assay demonstrated that PTTG1 knockdown had little effect on anchorage-dependent growth rate. Crystal violet staining and microscopic imaging of these colonies further revealed that 786-O cells exhibit no major morphological differences following PTTG1 knockdown.

Supplementary Figure S3. Direct targeting of ECT2 by siRNA results in a dose-dependent inhibition of ccRCC cell growth. (a) Depletion of ECT2 results in an accumulation of cells in G2/M phase. (b) MTS proliferation assays showed a dose-dependent reduction in 786-O cell growth upon treatment with siRNA’s targeting ECT2. (c) Cells unable to complete cell division acquired a multinucleate phenotype,indicative of cytokinesis defects upon ECT2 knockdown.