## Supplementary



**Figure S1** Effects of ECSIT on biological functions in MCF-7 breast cancer cells. Stable cell lines were generated with shRandom or shECSIT. (A) Immunofluorescence of EUD-positive in MCF-7 cells. Representative images (upper panel; scale bar =30 µm) and quantification of EDU-positive cells are shown (lower panel; n=6). (B) Cell migration capacities were evaluated by a wound-healing assay. Representative microscopic images are shown in the upper panels. The wound-healed distance (µm) was calculated with ImageJ software (lower panel; n=5). (C) Representative microscopic images are shown in the left panels. Cell invasion capacities were evaluated by comparing the numbers of invaded cells (right panel; n=6). Statistical significance was calculated for the indicated paired samples. shRandom, negative control; shECSIT, knockdown of ECSIT; EDU, 5-ethynyl-2-deoxyuridine; DAPI, 4',6-diamidino-2-phenylindole; n.s., no significance.



**Figure S2** Knockdown of the expression of ECSIT in 4T-1 cells has no effects in tumor-bearing mice. Control and ECSIT knockdown stable cell lines were injected subcutaneously into nude mice. The tumor sizes were measured every three days until they reached 2 cm<sup>3</sup>. (A) Tumor size and tumor weight were shown (n=6). (B) Tumor growth curves of 4T-1 cells in female nude mice are presented (n=6). Statistical significance was calculated for the indicated paired samples. shRandom, negative control; shECSIT, knockdown of ECSIT; n.s., no significance.