



Supplementary figure S1: CCK-8 assays comparing cell viability following treatment with Gemcitabine for 48 hours in parental and Gem-R PDAC cells. Error bars are the mean \pm SD. Gem-R, Gemcitabine-resistant; PDAC, pancreatic ductal adenocarcinoma.

Supplementary table S1: Patient characteristics of the TCGA dataset

| | TCGA | |
|-----------------------------------|-----------|-------------|
| | (n = 178) | |
| | n | (%) |
| Age, mean (\pm SD) (years) | 65 | (\pm 11) |
| Sex | | |
| Male | 98 | (55) |
| Female | 80 | (45) |
| Tumor location | | |
| Head | 139 | (78) |
| Body | 14 | (8) |
| Tail | 14 | (8) |
| Unknown | 11 | (6) |
| Tumor size, mean (\pm SD) (mm) | 39 | (\pm 17) |
| T stage | | |
| 1-2 | 31 | (17) |
| 3-4 | 145 | (82) |
| Unknown | 2 | (1) |
| Lymph node metastases | | |
| Negative | 49 | (27) |
| Positive | 124 | (70) |
| Unknown | 5 | (3) |
| Stage | | |
| I-II | 168 | (94) |
| III-IV | 8 | (4) |
| Unknown | 2 | (1) |

SD, standard deviation

Supplementary table S2: Patient characteristics of the clinical cohort

| | Total (n = 37) | |
|-----------------------------------|--------------------------|-------------|
| | n | (%) |
| Age, mean (\pm SD) (years) | 67 | (\pm 9) |
| Sex | | |
| Male | 21 | (57) |
| Female | 16 | (43) |
| Tumor location | | |
| Head | 12 | (32) |
| Body | 20 | (54) |
| Tail | 5 | (14) |
| Tumor size, mean (\pm SD) (mm) | 43 | (\pm 15) |
| T stage | | |
| 3 | 14 | (38) |
| 4 | 23 | (62) |
| Lymph node metastases | | |
| Negative | 12 | (32) |
| Positive | 25 | (68) |
| Stage | | |
| III | 4 | (11) |
| IV | 33 | (89) |
| Regimen | | |
| Gem + nab-paclitaxel | 35 | (95) |
| Gem + S-1 | 2 | (5) |
| RECIST 1.1 | | |
| PR | 10 | (27) |
| SD | 13 | (35) |
| PD | 14 | (38) |
| Responders or Non-responders | | |
| Responders | 23 | (62) |
| Non-responders | 14 | (38) |

SD, standard deviation; RECIST, response evaluation criteria in solid tumors; PR, partial response; SD, stable disease; PD, progressive disease; Gem, Gemcitabine; nab-paclitaxel, albumin-bound Paclitaxel; S-1, Tegafur /Gimeracil /Oteracil

Supplementary table S3: Primer sequences and their PCR conditions in this study

| Gene | Sense | Antisense | Size of the PCR products (bp) | Annealing temp (°C) | GenBank accession No |
|------------------|------------------------|------------------------|--|------------------------|-------------------------|
| <i>ERBB3</i> | GACCCAGGTCTACGATGGGAA | GTGAGCTGAGTCAAGCGGAG | 99 | 60 | NM_001982 |
| <i>Bcl-2</i> | GGTGCCACCTGTGGTCCACCTG | CTTCACTTGTGGCCAGATAGG | 459 | 60 | NM_000633 |
| <i>Cyclin D1</i> | ACCTGGATGCTGGAGGTCT | GCTCCATTTCAGCAGCTC | 241 | 60 | NM_053056 |
| <i>Caspase-3</i> | CAAACTTTTTCAGAGGGGATCG | GCATACTGTTTCAGCATGGCAC | 262 | 60 | NM_032991 |
| <i>β-actin</i> | AGAGCTACGAGCTGCCTGAC | AGCACTGTGTTGGCGTACAG | 184 | 60 | NM_001101 |