**Table S1**. Ingredients of rat diets.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Formula | g/Kg | Control diet | GEN diet | TAM diet | GEN+TAM diet |
| Casein | 200.0 | | | | |
| L-Cystine | 3.0 | | | | |
| Corn Starch | 397.4 | | | | |
| Maltodextrin | 132.0 | | | | |
| Sucrose | 75.0 | | | | |
| Corn Oil | 60.0 | | | | |
| Soybean Oil | 10.0 | | | | |
| Cellulose | 50.0 | | | | |
| Mineral Mix, AIN-93G-MX (94046) | 35.0 | | | | |
| Vitamin Mix, AIN-93G-VX (94047) | 10.0 | | | | |
| Choline Bitartrate | 2.5 | | | | |
| TBHQ, antioxidant | 0.014 | | | | |
| Genistein | 0.5 | ✖ | ✔ | ✖ | ✔ |
| Tamoxifen in sucrose | 25 | ✖ | ✖ | ✔ | ✔ |

**Table S2**. Responses of DMBA-induced ER+ mammary tumors to tamoxifen (TAM).

|  |  |
| --- | --- |
| Response (R) | Tumor vanishes and stays away for at least 6 weeks |
| Partial response (PR) | Tumor stops growing or shrinks |
| De novo resistant | a) Tumor continues to grow despite TAM treatment, or b) a new tumor appears during TAM treatment and grows |
| Acquired resistant | Tumor that vanished for at least 6 weeks, recurs at the same location, and grows to be at least 14 mm in diameter |

Table S3. Primers used for quantitative real-time PCR

|  |  |
| --- | --- |
| Gene | Sequence |
| *PgR*\_forward | 5’- TCACAACGCTTCTATCAACTTACAAA -3’ |
| *PgR*\_reverse | 5’- GGCAGCAATAACTTCAGACATCA -3’ |
| *Ki67*\_forward | 5’- ATTCAGGCCCTGCGAAGCCG -3’ |
| *Ki67*\_reverse | 5’- GCGTTGAAGGTAGGTGCCCCA -3’ |
| *Tgfβ1*\_forward | 5’- CCTGAGTGGCTGTCTTTTGA -3’ |
| *Tgfβ1*\_reverse | 5’- CGTGGAGTACATTATCTTTGCTG -3’ |
| *Foxp3*\_forward | 5’- TGCCACCTGGGATCAATGTG -3’ |
| *Foxp3*\_reverse | 5’- CGTGGGAAGGTGCAGAGTAGAGC -3’ |
| *Cd8a*\_forward | 5’- GCGATATTTACATCTGGGCACC -3’ |
| *Cd8a*\_reverse | 5’- AATTTCTCTGAAGGTCTGGGC -3’ |
| *Xbp1*\_forward | 5’- TACTGAAGAGGTCTCAGAGGC -3’ |
| *Xbp1s*\_reverse | 5’- AACTGGGCCTGCACCTGCTGCG-3’ |
| *Xbp1us*\_reverse | 5’- CGCACGTAGTCTGAGTGCT -3’ |
| *Hspa5*\_forward | 5’- GCACTTGGAATGACCCTT -3’ |
| *Hspa5*\_reverse | 5’- CAACCACCTTGAATGGCA -3’ |
| *Hprt*\_forward | 5’- CCCCAAAATGGTTAAGGTTGC -3’ |
| *Hprt*\_reverse | 5’- AACAAAGTCTGGCCTGTATCC -3’ |