

Table S1: Composition of experimental diets

| | SY | SO | OS | OSR | OT | OTR |
|--------------------------------|-----------|-----------|-----------|------------|-----------|------------|
| | g/kg | g/kg | g/kg | g/kg | g/kg | g/kg |
| Corn starch | 405 | 405 | 405 | 393 | 405 | 393 |
| Maltodextrin | 155 | 155 | 155 | 155 | 155 | 155 |
| Sucrose | 100 | 100 | 100 | 89.9 | 100 | 89.9 |
| Casein | 140 | 140 | 140 | 121.5 | 140 | 121.5 |
| L-cysteine | 2 | 2 | 2 | 2 | 2 | 2 |
| Soybean oil | 100 | 100 | 100 | 90.3 | - | - |
| Tea seed oil | - | - | - | - | 100 | 90.3 |
| Cellulose | 50 | 50 | 50 | 15.4 | 50 | 15.4 |
| Mineral mix (AIN-93M-MIX) | 35 | 35 | 35 | 22.2 | 35 | 22.2 |
| Vitamin mix (AIN-93M-MIX) | 10 | 10 | 10 | 9 | 10 | 9 |
| Choline bitartrate | 3 | 3 | 3 | 3 | 3 | 3 |
| <i>tert</i> -butylhydroquinone | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 |
| Rice bran | - | - | - | 100 | - | 100 |
| Total (g) | 1000.008 | 1000.008 | 1000.008 | 1001.308 | 1000.008 | 1001.308 |
| kcal/g | 4.108 | 4.108 | 4.108 | 4.103 | 4.108 | 4.103 |

SY: sham + young mice, SO: sham + old mice, OS: OVX mice + soybean oil diet, OSR: OVX mice + soybean oil with rice bran diet, OT: OVX mice + tea seed oil diet, OTR: OVX mice + tea seed oil with rice bran diet. Corn starch, maltodextrin, casein, cellulose, mineral mix, and vitamin mix were purchased from Hong Sheng Instruments (Taipei, Taiwan). L-Cysteine (Sigma-Aldrich, St. Louis, MO, USA), choline bitartrate (Sigma-Aldrich, St. Louis, MO, USA), and *tert*-butylhydroquinone (Sigma-Aldrich, St. Louis, MO, USA) were purchased from UNI-ONWARD (New Taipei, Taiwan). Sucrose, soybean oil, and tea seed oil were purchased from Taiwan Sugar Corporation (Tainan, Taiwan). Rice bran was provided by Professor Hitoshi Shirakawa, Tohoku University (Sendai, Japan).