Supporting Information

Quercetin, Luteolin, and Epigallocatechin Gallate Promote Glucose Disposal in Adipocytes with Regulation of AMP-Activated Kinase and/or Sirtuin 1 Activity

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Methods

Cytotoxicity test

Cytotoxicity was evaluated using the MTT assay, which included: a) blank wells containing medium; b) untreated control cells; and c) tested cells treated with the agents. Differentiated adipocytes were cultured in 96-well plates for 24 h in serum-free DMEM and pretreated with quercetin (1, 10, 50 μmol/L), luteolin (1, 10, 50 μmol/L), and EGCG (1, 10, 50 μmol/L) at 37°C. After removal of the medium, 20 μL of 5 mg/mL MTT was added to each well, including one set of wells with MTT but no cells (blank). Cells were incubated for 4 h at 37°C. The medium was removed, and 150 μL DMSO were added to each well. Then, the plates were shaken for 15 min to dissolve the formazan crystals. The absorbance at 570 nm was measured. The results were calculated as follows: Cell viability (%) = (A570 sample – A570 blank)/(A570 control – A570 blank) × 100.

Results

The adipocytes were cultured with quercetin, luteolin, and ECGC for 24 hours, and the viability of cells treated with agents at working concentrations ranging from 1 to 10 μmol/L did not decrease. Cell viability was partly repressed only when cells were exposed to agents with concentration of 50 μmol/L for 24 h. The results are shown in
**Supplementary Figures**

**Fig. 1S** The effect of quercetin, luteolin, and EGCG on cell viability in adipocytes. Cells were pretreated with quercetin (Que), luteolin (Lut), and EGCG for 24 h, and then cell viability was determined by the MTT assay. The results are expressed as the mean ± SD (n = 6). *P < 0.05 vs. control.