**Supplementary information**

**Table S2**

**Dose dependent and strain-dependent anti-obesity effects of *Lactobacillus sakei* in a diet induced obese murine model**

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**Supplementary Table S2.** Effect of the test materials/strains on body weight in HFD-induced obese mice. LFD, low-fat diet; HFD, high-fat diet; CJB38, CJB46 and CJLS03 denote the three *Lactobacillus* *sakei* strains; the three dose levels of each strain administered together with the HFD were 1 X 1010 CFU/mL (high-dose, H), 1 X 109 (medium-dose, M) and 1 X 108 CFU/mL (low-dose, L). Data expressed as mean ± SD (n=10).

\*, \*\*: significantly different from ND group at *p*<0.05, *p*<0.01; #, ##:: significantly different from HFD group at *p*<0.05, *p*<0.01.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Group | Day 0 | Day 4 | Day 7 | Day 10 | Day 14 | Day 17 | Day 21 | Day 24 | Day 28 | Day 31 | Day 35 | Day 38 | Day 42 | Day 45 | Day 48 |
| LFD | Mean | 24.48 | 24.16 | 24.16 | 24.58 | 24.52 | 24.91 | 24.73 | 24.70 | 24.80 | 25.13 | 25.09 | 24.98 | 25.55  | 25.27  | 25.92  |
| SD | 1.22 | 1.42 | 1.38 | 1.27 | 1.49 | 1.59 | 1.75 | 1.55 | 1.49 | 1.64 | 1.52 | 1.62 | 1.81  | 1.78  | 1.70  |
| HFD | Mean | 29.89\*\* | 29.94\*\* | 30.58\*\* | 30.64\*\* | 31.92\*\* | 32.67\*\* | 33.99\*\* | 34.09\*\* | 35.06\*\* | 35.11\*\* | 36.42\*\* | 37.09\*\* | 38.59\*\* | 38.07\*\* | 38.76\*\* |
| SD | 1.40 | 1.74 | 2.04 | 1.93 | 1.57 | 1.85 | 1.28 | 1.23 | 1.27 | 1.14 | 1.03 | 1.25 | 1.56  | 1.74  | 1.56  |
| Orlistat | Mean | 29.88\*\* | 27.33\*\*## | 25.14## | 24.89## | 25.34## | 26.69\*## | 27.52\*\*## | 28.36\*\*## | 28.70\*\*## | 29.06\*\*## | 28.33\*\*## | 29.15\*\*## | 30.95\*\*## | 31.90\*\*## | 32.47\*\*## |
| SD | 1.37 | 1.22 | 1.10 | 1.15 | 1.11 | 1.21 | 1.38 | 1.19 | 1.44 | 1.53 | 1.71 | 1.89 | 2.04  | 1.84  | 1.70  |
| CJB38 L | Mean | 29.89\*\* | 29.07\*\* | 29.72\*\* | 29.94\*\* | 30.93\*\* | 31.86\*\* | 32.45\*\* | 32.53\*\* | 33.45\*\* | 34.17\*\* | 34.74\*\* | 35.49\*\* | 36.72\*\* | 36.58\*\* | 36.92\*\* |
| SD | 1.39 | 1.42 | 1.67 | 1.72 | 1.70 | 1.70 | 1.90 | 1.88 | 1.98 | 1.81 | 1.76 | 1.78 | 1.97  | 2.00  | 1.80  |
| CJB38 M | Mean | 29.88\*\* | 29.22\*\* | 29.89\*\* | 30.14\*\* | 30.90\*\* | 31.67\*\* | 32.29\*\*# | 32.33\*\*# | 33.17\*\*# | 33.76\*\* | 34.10\*\*# | 34.52\*\*# | 36.30\*\* | 36.09\*\* | 36.14\*\*# |
| SD | 1.39 | 1.22 | 1.23 | 1.34 | 1.60 | 1.92 | 2.08 | 2.10 | 2.17 | 2.41 | 2.76 | 3.12 | 3.55  | 3.36  | 3.44  |
| CJB38 H | Mean | 29.87\*\* | 28.89\*\* | 29.51\*\* | 30.20\*\* | 30.87\*\* | 31.61\*\* | 32.28\*\*# | 32.33\*\*# | 33.14\*\*# | 33.84\*\* | 34.81\*\* | 35.43\*\* | 37.05\*\* | 36.85\*\* | 36.97\*\* |
| SD | 1.39 | 1.56 | 1.47 | 1.50 | 1.59 | 1.87 | 2.20 | 2.20 | 2.46 | 2.58 | 2.88 | 3.05 | 3.29  | 3.71  | 3.32  |
| CJB46 L | Mean | 29.89\*\* | 29.65\*\* | 30.21\*\* | 30.29\*\* | 31.01\*\* | 31.66\*\* | 32.16\*\*# | 32.33\*\*# | 33.26\*\* | 33.61\*\* | 33.81\*\*# | 34.15\*\*## | 35.54\*\*# | 35.24\*\*# | 35.34\*\*## |
| SD | 1.43 | 1.68 | 1.78 | 1.80 | 1.84 | 1.81 | 2.09 | 2.23 | 2.62 | 2.69 | 2.63 | 2.69 | 2.85  | 3.01  | 3.10  |
| CJB46 M | Mean | 29.88\*\* | 29.62\*\* | 29.97\*\* | 30.58\*\* | 31.20\*\* | 32.05\*\* | 32.36\*\*# | 32.43\*\*# | 33.10\*\*# | 33.43\*\* | 34.09\*\*# | 34.40\*\*# | 35.38\*\*## | 35.15\*\*# | 35.46\*\*## |
| SD | 1.39 | 1.41 | 1.63 | 1.62 | 1.53 | 1.59 | 1.79 | 1.49 | 1.77 | 1.96 | 1.95 | 2.01 | 1.93  | 2.06  | 2.12  |
| CJB46 H | Mean | 29.88\*\* | 29.45\*\* | 29.96\*\* | 30.47\*\* | 31.33\*\* | 32.73\*\* | 33.08\*\* | 32.80\*\* | 33.50\*\* | 34.10\*\* | 34.48\*\*# | 34.58\*\*# | 35.69\*\*# | 35.92\*\*# | 36.04\*\*# |
| SD | 1.40 | 1.26 | 1.24 | 1.10 | 0.69 | 0.64 | 1.09 | 1.64 | 2.08 | 2.16 | 2.46 | 2.95 | 3.18  | 2.88  | 3.63  |
| CJLS03 L | Mean | 29.89\*\* | 28.70\*\* | 29.00\*\*# | 29.73\*\* | 31.16\*\* | 32.18\*\* | 32.76\*\* | 32.70\*\* | 33.19\*\*# | 33.98\*\* | 34.56\*\* | 35.29\*\* | 36.47\*\* | 36.37\*\* | 36.46\*\*# |
| SD | 1.35 | 1.84 | 2.14 | 2.05 | 1.84 | 1.67 | 1.60 | 1.61 | 1.54 | 1.72 | 1.69 | 1.70 | 1.92  | 2.05  | 2.01  |
| CJLS03 M | Mean | 29.88\*\* | 29.03\*\* | 29.15\*\*# | 29.60\*\* | 30.01\*\*## | 30.82\*\*# | 31.27\*\*## | 31.28\*\*## | 31.79\*\*## | 32.43\*\*# | 33.15\*\*## | 33.36\*\*## | 34.42\*\*## | 34.21\*\*## | 34.43\*\*## |
| SD | 1.45 | 1.64 | 1.73 | 1.86 | 2.26 | 2.37 | 2.47 | 2.28 | 2.49 | 2.46 | 2.76 | 2.92 | 3.15  | 3.17  | 3.05  |
| CJLS03 H | Mean | 29.87\*\* | 28.69\*\* | 28.36\*\*## | 28.62\*\*## | 29.08\*\*## | 29.85\*\*## | 30.04\*\*## | 30.33\*\*## | 30.88\*\*## | 31.33\*\*## | 31.48\*\*## | 31.44\*\*## | 32.54\*\*## | 32.70\*\*## | 32.75\*\*## |
| SD | 1.39 | 1.59 | 1.63 | 1.27 | 1.33 | 1.60 | 1.90 | 1.97 | 2.39 | 2.45 | 2.86 | 2.97 | 2.91  | 3.07  | 2.81  |