**Mode of action of *Saccharomyces cerevisiae* in enteric methane mitigation in pigs**

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**Table S1** Ingredient composition and nutrient concentration of the basal diet

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| Ingredients | Concentration (g/kg)  |
| Corn | 700 |
| Soybean meal | 200 |
| Wheat bran  | 70 |
| Limestone | 10 |
| CaHPO3 | 5.2 |
| Salt | 4 |
| L-Lysine-HCl (78%) | 0.8 |
| Premixa | 10 |
| Nutrient Contentb |  |
| Metabolizable energy (MJ/kg) | 12.7 |
| Crude protein | 149.2 |
| Ether extract  | 31.0 |
| Crude fiber  | 28.0 |
| NDF  | 118.4 |
| ADF | 47.7 |
| Ca | 7.1 |
| Available phosphorus | 2.0 |
| Lys | 7.7 |
| Met + Cys | 4.7 |

a Provided per kg of diet: 3,400 IU; vitamin A, 1,200 IU; vitamin D3, 12 IU; vitamin E, 2.5 mg; vitamin K3, 1.0 mg; vitamin B1, 4.0 mg; vitamin B2, 2.4 mg; vitamin B6, 0.015 mg; vitamin B12, 35 mg; niacin, 16 mg; calcium pantothenate, 0.5 mg; folic acid, 0.05 mg; biotic, 40 mg; manganese, 50 mg; iron, 75 mg; zinc, 3.5 mg; copper, 0.14 mg; iodine, 0.15 mg; selenium, 0.15 mg.

b Value of crude protein was measured, the others were calculated.

**Table S2** Primer sequences of *Methanobrevibacter, mcr*A, 16S rRNA, andacetogens

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| Name of strain | Primer sequences (5’→3’) | Size of segment |
| *Methanobrevibacter* | F: TTTCGCCTAAGGATGGGTCTR: CGATTTCTCACATTGCGGAG | 157 bp |
| *Mcr A*-F*Mcr A*-R | TTCGGTGGATCDCARAGRGC GBARGTCGWAWCCGTAGAATCC | 140 bp |
| 16S rRNA-F16S rRNA-R | CGGCAACGAGCGCAACCC CCATTGTAGCACGTGTGTAGCC | 130 bp |
| Acetogens | F: CCTACGGGAGGCAGCAGR: ATTACCGCGGCTGGCTGG | 194 bp |