**Table S3** The report of antibiotic resistance proteins in the SD1.

|  |  |
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|   | **Resfam Identifier** |
| **Antibiotic Mechanism** | ***Lactobacillus paracasei* SD1** | ***Lactobacillus paracasei* PSD1-1** |
| Acetyltransferase | RF0004 |   |
| ABC Transporter | RF0007, RF0088, RF0089, RF0107 | RF0007, RF089, RF0107 |
| Acetyltransferase | RF0005, RF0050 |   |
| Antibiotic Inactivation | RF0136 |   |
| Beta-Lactamase | RF0037, RF0053, RF0054, RF0055, RF0056, RF0057, RF0062, RF0064, RF0081, RF0087, RF0108, RF0119, RF0123, RF0125, RF0126, RF0161 |   |
| Gene Modulating Resistance | RF0035, RF0036, RF0042, RF0091, RF0106, RF0112, RF0114, RF0116, RF0117, RF0121, RF0154, RF0155 |   |
| Gylcopeptide Resistance | RF0149, RF0150, RF0151, RF0152, RF0153, RF0156, RF0160, RF0149, RF0150, RF0151, RF0152, RF0153, RF0156, RF0160 |   |
| MFS Transporter | RF0065, RF0104, RF0109, RF0127, RF0128, RF0129, RF0130, RF0131, RF0132, RF0134, RF0137 |   |
| Other Efflux | RF0022, RF0023, RF0051, RF0066 |   |
| Phosphotransferase | RF0033, RF0034, RF0052, RF0172, RF0173 |   |
| Quinolone Resistance | RF0074 |   |
| RND Antibiotic Efflux | RF0019, RF0097 |   |
| rRNA Methyltransferase | RF0067, RF0068, RF0069, RF0070, RF0071 |   |
| Target Protection | RF0133, RF0135 |   |
| **Total**  | **80** | **3** |

\*\*\* Not found antibiotic resistance proteins in *Lactobacillus paracasei* plasmid pSD1-2