Table S2: Actual relative abundances of each sequence in each *iv*-SC based on error-free reads.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Community | | | | | |
| Clone | Expected\* | V3V4P | V6P | V3V4E | V6E | V3V4T | V6T |
| A32\_4-3Okaro10 | 0.18 | 0.30 | 0.22 | 0.0048 | 0.041 | 0.29 | 0.32 |
| A34\_SC8-3 | 0.18 | 0.20 | 0.090 | 0.0033 | 0.029 | 0.062 | 0.079 |
| A09\_SC7-1 | 0.15 | 0.094 | 0.14 | 0.0011 | 0.032 | 0.017 | 0.072 |
| A16\_LMM1-5 | 0.15 | 0.12 | 0.14 | 0.0046 | 0.083 | 0.067 | 0.19 |
| A05\_SC1-5 | 0.10 | 0.047 | 0.11 | **0** | 0.024 | 0.0048 | 0.057 |
| A38\_3-9 | 0.10 | 0.13 | 0.14 | 0.0063 | 0.11 | 0.045 | 0.17 |
| A35\_23-7 | 0.05 | 0.0094 | 0.059 | 0.0017 | 0.084 | 0.0044 | 0.055 |
| A36\_30-1 | 0.05 | 0.070 | 0.070 | 0.0063 | 0.089 | 0.033 | 0.056 |
| A10\_19-3 | 0.01 | 0.0085 | 0.0095 | 0.0089 | 0.036 | 0.0076 | 0.0047 |
| A14\_16-1 | 0.01 | **0** | 0.0039 | **0** | 0.015 | **0** | 0.0016 |
| J02\_0239\_1216C | 0.01 | 0.023 | 0.0098 | 0.83 | 0.0014 | 0.47 | 0.00020 |
| A08\_SC5-2 | 0.001 | 0.0031 | 0.00003 | 0.0080 | 0.00061 | 0.00076 | 0.00003 |
| A11\_29-2 | 0.001 | **0** | 0.00021 | **0** | **0** | **0** | **0** |
| A31\_Forsyth-N6 | 0.001 | 0.00018 | 0.0011 | 0.00043 | 0.049 | **0** | 0.00075 |
| A04\_Wahhi-22 | 0.0001 | 0.00037 | 0.00006 | 0.0078 | 0.057 | **0** | 0.00008 |
| A06\_SC4-1 | 0.0001 | 0.00018 | 0.00006 | 0.0028 | 0.083 | **0** | 0.00008 |
| A12\_3-1 | 0.0001 | 0.00055 | 0.00018 | 0.11 | 0.099 | 0.00045 | 0.00015 |
| A13\_6-1 | 0.00001 | **0** | 0.00003 | 0.00065 | 0.016 | **0** | **0** |
| A15\_EF222209 | 0.00001 | **0** | 0.00009 | 0.0046 | 0.14 | **0** | **0** |
| A17\_LMM1-24 | 0.00001 | **0** | **0** | 0.0026 | 0.0079 | **0** | **0** |

\*For P & T samples.