**Table S1 The summary of sequencing depth and coverage**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sample ID | Target region | Chr1 | Chr2 | Chr3 | Chr4 | Chr5 | Chr6 | Chr7 | Chr8 | Chr9 | Chr10 | Chr11 | Chr12 | Chr13 | Chr14 | Chr15 | Chr16 | Chr17 | Chr18 | Chr19 | Chr20 | Chr21 | Chr22 | Average depth |
| **Sequencing dept** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 09-323-N | Whole genome | 33.32 | 37.69 | 38.34 | 39.93 | 38.74 | 38.23 | 36.54 | 38.11 | 30.84 | 35.14 | 35.70 | 36.38 | 33.28 | 30.98 | 28.54 | 30.89 | 29.96 | 37.03 | 25.77 | 31.66 | 28.79 | 19.32 | 33.42 |
| 09-323-T | Whole genome | 46.99 | 51.57 | 51.95 | 52.81 | 55.76 | 51.88 | 50.45 | 52.05 | 43.08 | 49.34 | 49.88 | 50.38 | 44.19 | 42.92 | 40.63 | 50.82 | 46.02 | 50.25 | 42.47 | 46.66 | 39.94 | 31.03 | 47.32 |
| 09-679-N | Whole genome | 31.63 | 35.58 | 36.06 | 37.36 | 36.24 | 35.88 | 34.66 | 35.74 | 29.29 | 33.67 | 33.91 | 34.36 | 31.19 | 29.19 | 27.27 | 29.32 | 28.88 | 34.55 | 25.15 | 30.45 | 26.95 | 18.87 | 31.65 |
| 09-679-T | Whole genome | 44.67 | 50.60 | 56.23 | 53.50 | 51.73 | 51.24 | 53.71 | 51.00 | 41.75 | 47.26 | 47.91 | 48.95 | 44.47 | 41.62 | 38.62 | 44.29 | 44.09 | 49.66 | 35.37 | 46.01 | 41.46 | 25.70 | 45.90 |
| 11-1060-N | Whole genome | 37.36 | 41.59 | 41.93 | 43.12 | 42.28 | 41.86 | 40.85 | 42.01 | 34.38 | 39.83 | 39.90 | 40.46 | 36.00 | 34.32 | 33.36 | 35.51 | 35.46 | 40.54 | 31.42 | 36.56 | 31.97 | 23.46 | 37.46 |
| 11-1060-T | Whole genome | 43.61 | 50.34 | 50.54 | 52.84 | 51.05 | 56.40 | 66.26 | 50.22 | 42.12 | 45.94 | 46.88 | 47.74 | 43.98 | 40.62 | 38.64 | 51.34 | 38.79 | 48.97 | 32.63 | 41.24 | 37.14 | 24.57 | 45.54 |
| 11-849-N | Whole genome | 38.09 | 43.11 | 43.78 | 45.42 | 44.03 | 43.55 | 42.10 | 43.47 | 35.23 | 40.56 | 41.04 | 41.62 | 37.89 | 35.47 | 32.85 | 35.40 | 35.02 | 41.99 | 29.90 | 36.69 | 32.90 | 22.92 | 38.32 |
| 11-849-T | Whole genome | 45.64 | 52.12 | 65.10 | 55.54 | 59.31 | 52.57 | 62.11 | 52.61 | 42.41 | 48.32 | 49.34 | 61.18 | 46.25 | 42.70 | 39.07 | 49.44 | 49.31 | 51.21 | 34.21 | 43.35 | 39.58 | 26.40 | 48.54 |
| 3659-T | Whole genome | 39.55 | 42.44 | 43.17 | 45.07 | 43.42 | 42.95 | 41.14 | 42.91 | 35.19 | 39.45 | 40.32 | 40.88 | 37.56 | 34.66 | 32.18 | 45.34 | 33.99 | 41.89 | 28.93 | 35.74 | 32.58 | 21.78 | 38.23 |
| 3659-N | Whole genome | 32.57 | 36.87 | 37.57 | 39.32 | 37.83 | 37.44 | 35.87 | 37.36 | 30.57 | 34.30 | 34.92 | 35.62 | 32.71 | 30.16 | 27.97 | 30.40 | 29.30 | 36.29 | 25.07 | 30.76 | 28.34 | 18.50 | 32.72 |
| FAM-100B | Whole exome | 82.90 | 81.09 | 83.04 | 79.38 | 83.03 | 85.87 | 78.97 | 79.06 | 81.28 | 82.79 | 86.56 | 78.76 | 82.15 | 80.00 | 77.13 | 81.14 | 83.84 | 80.19 | 82.09 | 84.46 | 83.67 | 77.13 | 81.57 |
| FAM-100T | Whole exome | 114.79 | 126.73 | 113.49 | 112.26 | 114.32 | 131.69 | 102.08 | 125.83 | 109.16 | 113.19 | 115.81 | 109.10 | 116.35 | 107.96 | 89.28 | 113.96 | 162.50 | 108.69 | 118.30 | 115.68 | 116.63 | 95.51 | 115.15 |
| TAR-06B | Whole exome | 66.24 | 84.36 | 66.84 | 67.33 | 67.78 | 69.72 | 66.42 | 79.38 | 64.38 | 66.13 | 62.65 | 65.35 | 62.68 | 63.48 | 67.23 | 55.77 | 79.83 | 59.71 | 53.21 | 57.99 | 61.38 | 53.21 | 65.50 |
| TAR-06T | Whole exome | 80.13 | 93.05 | 83.95 | 93.40 | 86.70 | 86.52 | 82.51 | 78.59 | 77.12 | 82.57 | 74.14 | 82.01 | 86.86 | 78.79 | 82.22 | 61.54 | 68.89 | 85.83 | 61.81 | 63.87 | 73.15 | 56.43 | 78.19 |
| **Sequencing coverage** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 09-323-N | Whole genome | 0.89 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.96 | 0.96 | 0.83 | 0.95 | 0.95 | 0.96 | 0.82 | 0.81 | 0.78 | 0.85 | 0.93 | 0.95 | 0.88 | 0.92 | 0.71 | 0.65 | 0.89 |
| 09-323-T | Whole genome | 0.90 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.97 | 0.97 | 0.85 | 0.97 | 0.97 | 0.97 | 0.83 | 0.82 | 0.79 | 0.87 | 0.95 | 0.95 | 0.94 | 0.94 | 0.73 | 0.68 | 0.91 |
| 09-679-N | Whole genome | 0.89 | 0.97 | 0.98 | 0.97 | 0.97 | 0.97 | 0.96 | 0.96 | 0.83 | 0.96 | 0.96 | 0.96 | 0.82 | 0.81 | 0.79 | 0.85 | 0.93 | 0.95 | 0.90 | 0.93 | 0.72 | 0.65 | 0.90 |
| 09-679-T | Whole genome | 0.90 | 0.97 | 0.98 | 0.98 | 0.98 | 0.97 | 0.97 | 0.97 | 0.84 | 0.96 | 0.96 | 0.97 | 0.83 | 0.82 | 0.79 | 0.86 | 0.94 | 0.95 | 0.92 | 0.93 | 0.72 | 0.66 | 0.90 |
| 11-1060-N | Whole genome | 0.90 | 0.97 | 0.98 | 0.98 | 0.98 | 0.97 | 0.97 | 0.97 | 0.84 | 0.96 | 0.97 | 0.97 | 0.83 | 0.82 | 0.79 | 0.86 | 0.95 | 0.95 | 0.92 | 0.94 | 0.72 | 0.67 | 0.91 |
| 11-1060-T | Whole genome | 0.89 | 0.97 | 0.98 | 0.97 | 0.98 | 0.97 | 0.97 | 0.97 | 0.84 | 0.96 | 0.96 | 0.97 | 0.83 | 0.81 | 0.79 | 0.86 | 0.94 | 0.95 | 0.90 | 0.93 | 0.72 | 0.66 | 0.90 |
| 11-849-N | Whole genome | 0.90 | 0.97 | 0.98 | 0.98 | 0.98 | 0.97 | 0.97 | 0.97 | 0.84 | 0.96 | 0.96 | 0.97 | 0.83 | 0.82 | 0.79 | 0.86 | 0.94 | 0.95 | 0.92 | 0.93 | 0.72 | 0.67 | 0.90 |
| 11-849-T | Whole genome | 0.90 | 0.97 | 0.98 | 0.98 | 0.98 | 0.97 | 0.97 | 0.97 | 0.84 | 0.96 | 0.97 | 0.97 | 0.83 | 0.82 | 0.79 | 0.87 | 0.95 | 0.95 | 0.92 | 0.94 | 0.72 | 0.67 | 0.91 |
| 3659-T | Whole genome | 0.89 | 0.97 | 0.98 | 0.98 | 0.98 | 0.97 | 0.96 | 0.97 | 0.84 | 0.96 | 0.96 | 0.97 | 0.83 | 0.81 | 0.79 | 0.86 | 0.94 | 0.95 | 0.90 | 0.93 | 0.72 | 0.66 | 0.90 |
| 3659-N | Whole genome | 0.88 | 0.96 | 0.97 | 0.97 | 0.97 | 0.97 | 0.95 | 0.96 | 0.82 | 0.95 | 0.95 | 0.96 | 0.82 | 0.80 | 0.78 | 0.83 | 0.91 | 0.94 | 0.86 | 0.91 | 0.71 | 0.63 | 0.89 |
| FAM-100B | Whole exome | 0.93 | 0.93 | 0.95 | 0.93 | 0.94 | 0.94 | 0.91 | 0.93 | 0.93 | 0.93 | 0.94 | 0.91 | 0.94 | 0.90 | 0.89 | 0.90 | 0.93 | 0.93 | 0.93 | 0.95 | 0.94 | 0.92 | 0.93 |
| FAM-100T | Whole exome | 0.93 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.90 | 0.94 | 0.92 | 0.92 | 0.93 | 0.90 | 0.94 | 0.90 | 0.88 | 0.90 | 0.94 | 0.93 | 0.94 | 0.94 | 0.93 | 0.90 | 0.92 |
| TAR-06B | Whole exome | 0.88 | 0.90 | 0.88 | 0.87 | 0.87 | 0.89 | 0.85 | 0.84 | 0.86 | 0.88 | 0.84 | 0.86 | 0.88 | 0.84 | 0.86 | 0.80 | 0.88 | 0.86 | 0.78 | 0.84 | 0.85 | 0.81 | 0.86 |
| TAR-06T | Whole exome | 0.88 | 0.90 | 0.89 | 0.87 | 0.88 | 0.89 | 0.85 | 0.82 | 0.86 | 0.88 | 0.83 | 0.87 | 0.88 | 0.85 | 0.86 | 0.80 | 0.85 | 0.87 | 0.78 | 0.84 | 0.85 | 0.81 | 0.86 |