Table 1: Experimental results AF488 data. $\tau_D$ in $\mu s$. For 1 species fit, $N = N(FCS) * T1$. For 2 species fit, $N^{sp} = A^{sp} * (N(FCS) * T1)$ and $\tau_D$ is sorted in fast and slow. If $A^{sp} = 100\%$, only display the corresponding $\tau_D$ and $N$ values. 2 species fit results of AF488 in solution has no biophysical relevance and is only shown for completion

| type of processing | artifact fit | af488 | af488+luvs |
|---|---|---|---|
| no correction | 1 | $\tau_D = 39.7 \quad N = 14.3$ | $\tau_D = 7355.0 \quad N = 4.7$ |
| | 2 | $\tau_D^{fast} = 9.5 \quad N^{fast} = 4.9$<br>$\tau_D^{slow} = 69.8 \quad N^{slow} = 8.6$ | $\tau_D^{fast} = 78.3 \quad N^{fast} = 0.7$<br>$\tau_D^{slow} = 11944.6 \quad N^{slow} = 3.5$ |
| ff67b | 1 | $\tau_D = 39.8 \quad N = 14.3$ | $\tau_D = 94.0 \quad N = 22.4$ |
| | 2 | $\tau_D^{fast} = 9.9 \quad N^{fast} = 5.0$<br>$\tau_D^{slow} = 71.7 \quad N^{slow} = 8.4$ | $\tau_D^{fast} = 41.8 \quad N^{fast} = 13.1$<br>$\tau_D^{slow} = 20282.4 \quad N^{slow} = 5.2$ |
| 34766 | 1 | $\tau_D = 35.1 \quad N = 14.7$ | $\tau_D = 62.5 \quad N = 23.2$ |
| | 2 | $\tau_D^{fast} = 1.4 \quad N^{fast} = 2.4$<br>$\tau_D^{slow} = 42.0 \quad N^{slow} = 10.7$ | $\tau_D^{fast} = 38.9 \quad N^{fast} = 15.8$<br>$\tau_D^{slow} = 24434.3 \quad N^{slow} = 4.1$ |
| 714af | 1 | $\tau_D = 39.8 \quad N = 14.3$ | $\tau_D = 104.2 \quad N = 22.3$ |
| | 2 | $\tau_D^{fast} = 10.0 \quad N^{fast} = 5.1$<br>$\tau_D^{slow} = 71.9 \quad N^{slow} = 8.4$ | $\tau_D^{fast} = 41.8 \quad N^{fast} = 12.3$<br>$\tau_D^{slow} = 21435.4 \quad N^{slow} = 5.5$ |
| 34a6d | 1 | $\tau_D = 39.7 \quad N = 14.3$ | $\tau_D = 78.9 \quad N = 22.5$ |
| | 2 | $\tau_D^{fast} = 9.4 \quad N^{fast} = 4.8$<br>$\tau_D^{slow} = 69.6 \quad N^{slow} = 8.6$ | $\tau_D^{fast} = 41.9 \quad N^{fast} = 14.2$<br>$\tau_D^{slow} = 22526.1 \quad N^{slow} = 4.6$ |
| 484af | 1 | $\tau_D = 39.8 \quad N = 14.3$ | $\tau_D = 91.2 \quad N = 22.5$ |
| | 2 | $\tau_D^{fast} = 10.1 \quad N^{fast} = 5.1$<br>$\tau_D^{slow} = 72.2 \quad N^{slow} = 8.4$ | $\tau_D^{fast} = 41.2 \quad N^{fast} = 12.8$<br>$\tau_D^{slow} = 23742.5 \quad N^{slow} = 5.2$ |
| 0cd20 | 1 | $\tau_D = 39.6 \quad N = 14.3$ | $\tau_D = 71.3 \quad N = 21.7$ |
| | 2 | $\tau_D^{fast} = 8.9 \quad N^{fast} = 4.6$<br>$\tau_D^{slow} = 67.5 \quad N^{slow} = 8.8$ | $\tau_D^{fast} = 38.8 \quad N^{fast} = 15.5$<br>$\tau_D^{slow} = 5823.0 \quad N^{slow} = 3.9$ |
| fe81d | 1 | $\tau_D = 39.8 \quad N = 14.3$ | $\tau_D = 90.4 \quad N = 22.3$ |
| | 2 | $\tau_D^{fast} = 10.0 \quad N^{fast} = 5.0$<br>$\tau_D^{slow} = 71.8 \quad N^{slow} = 8.4$ | $\tau_D^{fast} = 42.0 \quad N^{fast} = 13.3$<br>$\tau_D^{slow} = 19906.1 \quad N^{slow} = 5.0$ |
| 19e3e | 1 | $\tau_D = 39.6 \quad N = 14.3$ | $\tau_D = 79.8 \quad N = 22.4$ |
| | 2 | $\tau_D^{fast} = 9.2 \quad N^{fast} = 4.8$<br>$\tau_D^{slow} = 68.9 \quad N^{slow} = 8.7$ | $\tau_D^{fast} = 41.7 \quad N^{fast} = 13.6$<br>$\tau_D^{slow} = 27489.8 \quad N^{slow} = 4.7$ |
| c1204 | 1 | $\tau_D = 29.2 \quad N = 15.2$ | $\tau_D = 51.4 \quad N = 23.8$ |
| | 2 | $\tau_D^{fast} = 0.1 \quad N^{fast} = 3.9$<br>$\tau_D^{slow} = 31.4 \quad N^{slow} = 5.0$ | $\tau_D^{fast} = 35.5 \quad N^{fast} = 16.4$<br>$\tau_D^{slow} = 39055.9 \quad N^{slow} = 3.9$ |