**Table S2**. Diffusion coefficients of wild-type PTEN and PTEN mutants in the two-component model.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***NAME*** | ***a*1** | ***a*2** | ***D*1 [μm2/s]** | ***D*2 [μm2/s]** |
| PTEN | 0.924 | 0.034 | 0.026 | 0.423 |
| PTEN1 | 0.917 | 0.019 | 0.034 | 0.427 |
| PTEN2 | 0.943 | 0.016 | 0.045 | 0.518 |
| PTEN3 | 0.939 | 0.044 | 0.035 | 0.543 |
| PTEN4 | 0.900 | 0.074 | 0.020 | 0.593 |
| PTEN5 | 0.807 | 0.236 | 0.027 | 0.498 |
| PTEN6 | 0.839 | 0.178 | 0.021 | 0.508 |
| PTEN7 | 0.857 | 0.154 | 0.025 | 0.448 |
| PTEN4+Latrunculin A | 0.731 | 0.310 | 0.016 | 0.566 |

Parameters obtained from fitting the data in Fig. S3 with Eq. 2 (*n*=2). The observable lowest *D* was *ε*2/∆*t*, where *ε* is a standard deviation of measurement error calculated from the mean square displacement of the trajectories [20].