* 1. **Overview of anion transport results**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Compound** | **EC50 (mol%)** | **Error****(EC50)** | **n** | **Error****(n)** | **kini (% s-1)** | **Error****(kini)** |
| 1 | 0.0072 | 0.0015 | 1.19 | 0.16 | 0.95 | 0.11 |
| 2 | 0.0061 | 0.0018 | 1.23 | 0.20 | 1.41 | 0.46 |
| 3 | 0.0070 | 0.0020 | 1.25 | 0.12 | 1.24 | 0.27 |
| 4 | 0.0078 | 0.0011 | 1.19 | 0.17 | 1.17 | 0.15 |
| 5 | 0.0104 | 0.0022 | 1.30 | 0.01 | 1.02 | 0.25 |
| 6 | 0.0095 | 0.0017 | 1.25 | 0.10 | 1.13 | 0.16 |
| 7 | 0.2884 | 0.0402 | 0.96 | 0.13 | 0.02 | 0.01 |
| 8 | 0.0688 | 0.0204 | 1.42 | 0.04 | 0.23 | 0.07 |
| 9 | 0.0197 | 0.0049 | 1.29 | 0.15 | 0.64 | 0.09 |
| 10 | 0.0136 | 0.0017 | 1.28 | 0.09 | 0.79 | 0.15 |
| 11 | 0.0231 | 0.0014 | 1.31 | 0.06 | 0.47 | 0.11 |
| 12 | 0.0262 | 0.0075 | 1.29 | 0.16 | 0.49 | 0.15 |
| 13 | 0.0208 | 0.0018 | 1.18 | 0.36 | 0.47 | 0.09 |
| 14 | 0.0155 | 0.0025 | 1.27 | 0.12 | 0.66 | 0.22 |
| 15 | 0.0236 | 0.0018 | 1.37 | 0.12 | 0.44 | 0.05 |
| 16 | 0.0221 | 0.0025 | 1.29 | 0.08 | 0.51 | 0.04 |
| 17 | 0.0167 | 0.0023 | 1.48 | 0.10 | 0.83 | 0.16 |
| 18 | 0.0494 | 0.0035 | 1.59 | 0.20 | 0.31 | 0.02 |
| 19 | 0.1965 | 0.0144 | 0.85 | 0.05 | 0.09 | 0.01 |
| 20 | 0.3459 | 0.0659 | 1.30 | 0.27 | 0.04 | 0.01 |
| 21 | 0.0921 | 0.0144 | 1.08 | 0.16 | 0.21 | 0.01 |
| 22 | 0.0274 | 0.0023 | 1.04 | 0.10 | 0.52 | 0.02 |
| 23 | 0.0116 | 0.0009 | 0.86 | 0.08 | 0.74 | 0.05 |
| 24 | 0.0065 | 0.0004 | 1.18 | 0.09 | 1.46 | 0.09 |
| 25 | 0.0050 | 0.0003 | 1.19 | 0.09 | 1.50 | 0.17 |
| 26 | 0.0045 | 0.0002 | 1.51 | 0.13 | 1.52 | 0.12 |
| 27 | 0.0031 | 0.0003 | 1.07 | 0.14 | 2.63 | 0.11 |
| 28 | 0.0038 | 0.0002 | 1.10 | 0.16 | 1.63 | 0.25 |
| 29 | 0.0053 | 0.0003 | 1.33 | 0.12 | 1.54 | 0.27 |
| 30 | 0.0073 | 0.0007 | 1.15 | 0.12 | 1.09 | 0.12 |
| 31 | 0.0113 | 0.0002 | 1.20 | 0.02 | 0.94 | 0.10 |
| 32 | 0.0067 | 0.0002 | 1.05 | 0.03 | 1.01 | 0.06 |
| 33 | 0.0977 | 0.0125 | 0.96 | 0.15 | 0.22 | 0.04 |
| 34 | 0.0157 | 0.0022 | 1.32 | 0.28 | 0.74 | 0.01 |
| 35 | 0.0116 | 0.0005 | 1.20 | 0.09 | 0.71 | 0.03 |
| 36 | 0.0123 | 0.0031 | 0.86 | 0.20 | 0.32 | 0.08 |
| 37 | 0.0133 | 0.0007 | 1.45 | 0.10 | 0.60 | 0.03 |
| 38 | 0.0088 | 0.0007 | 1.43 | 0.19 | 1.69 | 0.09 |
| 39 | 0.0196 | 0.0005 | 1.14 | 0.04 | 0.60 | 0.04 |
| 40 | 0.0097 | 0.0005 | 1.74 | 0.11 | 1.16 | 0.11 |
| 41 | 0.0052 | 0.0004 | 1.15 | 0.12 | 1.04 | 0.01 |
| 42 | 0.0204 | 0.0017 | 0.93 | 0.12 | 0.42 | 0.03 |
| 43 | 0.0616a | 0.0241 | -a | - | 0.19 | 0.03 |

Table S1. Overview of average of the obtained *EC50*, *n* and *kini* values. a Large error in Hill plot due to solubility issues. EC50 calculated from correlation with kini (see Figure S165).