

**Table S5.** YM155 concentrations that reduce the viability of neuroblastoma cell lines by 50% (IC<sub>50</sub>, mean ± S.D., n = 3) in the absence or presence of the ABCB1 inhibitors verapamil (5 μM) or zosuquidar (1.25 μM) as indicated by MTT assay after 120h of incubation.

| Cell line                                | YM155 IC <sub>50</sub> (nM) | + verapamil (5 μM)   |                                | + zosuquidar (1.25 μM) |                             |
|--|-----------------------------|----------------------|--------------------------------|------------------------|-----------------------------|
|  |                             | verapamil alone      | YM155 IC <sub>50</sub> (nM)    | zosuquidar alone       | YM155 IC <sub>50</sub> (nM) |
| CHP-134                                  | 2.64 ± 0.50                 | 94 ± 13 <sup>1</sup> | 1.64 ± 0.27 (1.6) <sup>2</sup> | 105 ± 6 <sup>1</sup>   | 1.85 ± 0.34 (2.4)           |
| GIMEN                                    | 33.74 ± 2.26                | 105 ± 3              | 52.90 ± 8.62 (0.6)             | 92 ± 7                 | 50.87 ± 5.91 (0.7)          |
| IMR-5                                    | 7.18 ± 1.04                 | 109 ± 8              | 9.70 ± 1.97 (0.7)              | 104 ± 11               | 10.64 ± 2.80 (0.7)          |
| IMR-5 <sup>r</sup> CARBO <sup>5000</sup> | 8.55 ± 2.01                 | 91 ± 16              | 7.80 ± 0.28 (1.1)              | 105 ± 8                | 27.01 ± 3.04 (0.3)          |
| IMR-5 <sup>r</sup> CDDP <sup>1000</sup>  | 19.71 ± 5.70                | 88 ± 11              | 15.23 ± 4.21 (1.3)             | 100 ± 6                | 33.47 ± 6.84 (0.6)          |
| IMR-5 <sup>r</sup> DOCE <sup>20</sup>    | 21549 ± 638                 | 90 ± 7               | 149.01 ± 1.99 (145)            | 112 ± 2                | 13.63 ± 5.54 (1581)         |
| IMR-5 <sup>r</sup> DOX <sup>20</sup>     | 116.31 ± 21.63              | 97 ± 9               | 17.60 ± 0.57 (6.6)             | 99 ± 8                 | 13.45 ± 2.45 (8.6)          |
| IMR-5 <sup>r</sup> ETO <sup>100</sup>    | 8.29 ± 3.95                 | 95 ± 10              | 6.99 ± 2.79 (1.2)              | 97 ± 4                 | 18.26 ± 3.19 (0.5)          |
| IMR-5 <sup>r</sup> GEMCI <sup>20</sup>   | 7.08 ± 1.20                 | 108 ± 6              | 7.90 ± 2.09 (0.9)              | 105 ± 8                | 12.73 ± 3.34 (0.6)          |
| IMR-5 <sup>r</sup> MEL <sup>1000</sup>   | 11.10 ± 1.57                | 92 ± 8               | 6.63 ± 1.30 (1.7)              | 107 ± 6                | 12.80 ± 1.22 (0.9)          |
| IMR-5 <sup>r</sup> OXALI <sup>4000</sup> | 10.18 ± 2.69                | 96 ± 8               | 15.80 ± 1.77 (0.6)             | 110 ± 6                | 16.81 ± 2.71 (0.6)          |
| IMR-5 <sup>r</sup> TOPO <sup>20</sup>    | 4.88 ± 1.72                 | 100 ± 13             | 5.94 ± 1.31 (0.8)              | 101 ± 7                | 11.77 ± 3.95 (0.4)          |
| IMR-5 <sup>r</sup> VCR <sup>10</sup>     | 472.94 ± 97.42              | 93 ± 8               | 13.05 ± 2.90 (36)              | 94 ± 5                 | 19.35 ± 0.07 (24)           |
| IMR-5 <sup>r</sup> VINB <sup>20</sup>    | 1608 ± 212                  | 93 ± 7               | 9.34 ± 0.94 (172)              | 93 ± 6                 | 10.05 ± 1.06 (160)          |
| IMR-32                                   | 1.40 ± 0.35                 | 102 ± 7              | 1.70 ± 0.41 (0.8)              | 101 ± 3                | 1.80 ± 0.23 (0.8)           |
| IMR-32 <sup>r</sup> DOX <sup>20</sup>    | 35.63 ± 2.23                | 92 ± 15              | 1.75 ± 0.77 (20)               | 89 ± 13                | 0.94 ± 0.08 (38)            |
| IMR-32 <sup>r</sup> ETO <sup>100</sup>   | 1.53 ± 0.13                 | 90 ± 5               | 1.60 ± 0.27 (1.0)              | 104 ± 6                | 3.55 ± 0.21 (2.2)           |
| IMR-32 <sup>r</sup> GEMCI <sup>20</sup>  | 2.16 ± 0.22                 | 105 ± 8              | 1.15 ± 0.05 (1.9)              | 107 ± 11               | 4.20 ± 0.45 (0.5)           |
| IMR-32 <sup>r</sup> OXALI <sup>800</sup> | 0.60 ± 0.02                 | 99 ± 8               | 0.71 ± 0.08 (0.8)              | 105 ± 12               | 1.18 ± 0.07 (1.7)           |
| IMR-32 <sup>r</sup> TOPO <sup>7.5</sup>  | 0.45 ± 0.06                 | 97 ± 10              | 0.61 ± 0.07 (0.7)              | 101 ± 2                | 0.97 ± 0.04 (0.5)           |
| LAN-6                                    | 248.08 ± 32.90              | 99 ± 8               | 46.75 ± 2.33 (5.3)             | 103 ± 5                | 24.35 ± 1.06 (10.2)         |
| NB-S-124                                 | 76.66 ± 6.51                | 103 ± 6              | 12.52 ± 1.16 (6.1)             | 110 ± 8                | 3.20 ± 0.40 (24.0)          |
| NGP                                      | 12.48 ± 3.01                | 91 ± 8               | 17.35 ± 4.97 (0.7)             | 109 ± 2                | 24.95 ± 0.21 (0.5)          |
| NGP <sup>r</sup> CARBO <sup>5000</sup>   | 112.33 ± 5.0                | 112 ± 9              | 76.10 ± 3.17 (1.5)             | 107 ± 5                | 158.24 ± 9.34 (0.7)         |
| NGP <sup>r</sup> CDDP <sup>1000</sup>    | 13.00 ± 0.42                | 104 ± 5              | 19.61 ± 1.35 (0.7)             | 101 ± 18               | 17.80 ± 0.97 (0.7)          |
| NGP <sup>r</sup> DACARB <sup>18</sup>    | 20.59 ± 1.84                | 107 ± 2              | 26.26 ± 4.77 (0.8)             | 103 ± 7                | 41.90 ± 5.27 (0.5)          |
| NGP <sup>r</sup> DOX <sup>20</sup>       | 306.90 ± 78.5               | 92 ± 6               | 5.52 ± 0.35 (56)               | 90 ± 2                 | 0.70 ± 0.04 (438)           |
| NGP <sup>r</sup> ETO <sup>400</sup>      | 59.20 ± 11.40               | 98 ± 16              | 50.14 ± 16.45 (1.2)            | 98 ± 3                 | 39.12 ± 7.87 (1.5)          |
| NGP <sup>r</sup> GEMCI <sup>20</sup>     | 41.55 ± 6.13                | 94 ± 13              | 73.43 ± 16.41 (0.6)            | 105 ± 12               | 10.50 ± 1.34 (4.0)          |
| NGP <sup>r</sup> MEL <sup>3000</sup>     | 26.10 ± 3.86                | 99 ± 10              | 24.34 ± 1.76 (1.1)             | 108 ± 9                | 18.75 ± 4.64 (1.4)          |
| NGP <sup>r</sup> OXALI <sup>4000</sup>   | 6.93 ± 0.28                 | 102 ± 8              | 12.25 ± 2.78 (0.6)             | 101 ± 12               | 8.21 ± 1.04 (0.8)           |
| NGP <sup>r</sup> VCR <sup>20</sup>       | 6986.25 ± 715               | 100 ± 10             | 157.60 ± 11.79 (44)            | 106 ± 15               | 16.20 ± 1.74 (431)          |
| NLF                                      | 4.18 ± 0.27                 | 93 ± 8               | 4.55 ± 0.32 (0.9)              | 99 ± 5                 | 2.85 ± 0.14 (1.5)           |

|   |                   |          |                     |          |                     |
|---|-------------------|----------|---------------------|----------|---------------------|
| NLF <sup>r</sup> CARBO <sup>5000</sup>      | 340.51 ± 34.47    | 95 ± 7   | 196.4 ± 17.9 (1.7)  | 104 ± 8  | 569.90 ± 76.7 (0.6) |
| NLF <sup>r</sup> CDDP <sup>500</sup>        | 12.58 ± 5.39      | 103 ± 6  | 20.10 ± 1.84 (0.6)  | 101 ± 15 | 24.84 ± 3.25 (0.5)  |
| NLF <sup>r</sup> DOCE <sup>200</sup>        | 21.60 ± 5.98      | 99 ± 4   | 8.58 ± 0.76 (2.5)   | 109 ± 9  | 3.93 ± 0.17 (5.5)   |
| NLF <sup>r</sup> DOX <sup>40</sup>          | 34.88 ± 4.33      | 110 ± 18 | 31.15 ± 0.78 (1.1)  | 98 ± 6   | 59.81 ± 1.41 (0.6)  |
| NLF <sup>r</sup> ETO <sup>100</sup>         | 7.40 ± 0.54       | 108 ± 5  | 9.35 ± 0.50 (0.8)   | 97 ± 12  | 11.05 ± 0.63 (0.7)  |
| NLF <sup>r</sup> GEMCI <sup>20</sup>        | 1.84 ± 0.47       | 94 ± 10  | 2.30 ± 0.14 (0.8)   | 108 ± 13 | 2.65 ± 0.50 (0.7)   |
| NLF <sup>r</sup> RINO <sup>1000</sup>       | 6.93 ± 0.71       | 98 ± 9   | 3.83 ± 0.64 (1.8)   | 89 ± 17  | 10.96 ± 1.37 (0.6)  |
| NLF <sup>r</sup> MEL <sup>3000</sup>        | 15.36 ± 3.20      | 100 ± 7  | 12.70 ± 0.14 (1.2)  | 105 ± 11 | 27.45 ± 0.99 (0.6)  |
| NLF <sup>r</sup> OXALI <sup>4000</sup>      | 33.67 ± 2.67      | 102 ± 11 | 30.05 ± 2.33 (1.1)  | 96 ± 3   | 51.25 ± 13.51 (0.7) |
| NLF <sup>r</sup> VCR <sup>10</sup>          | 334.45 ± 21.6     | 90 ± 14  | 74.70 ± 19.13 (4.5) | 99 ± 18  | 295.8 ± 34.9 (1.1)  |
| NLF <sup>r</sup> VINB <sup>10</sup>         | 38.10 ± 12.02     | 95 ± 6   | 36.74 ± 7.24 (1.0)  | 106 ± 8  | 65.67 ± 11.06 (0.6) |
| <i>SHEP</i>                                 | 10.15 ± 0.84      | 88 ± 5   | 3.92 ± 0.11 (2.6)   | 95 ± 11  | 3.20 ± 0.14 (3.2)   |
| SHEP <sup>r</sup> CDDP <sup>1000</sup>      | 30.83 ± 2.24      | 105 ± 3  | 5.50 ± 0.37 (5.6)   | 110 ± 8  | 5.27 ± 0.17 (5.9)   |
| SHEP <sup>r</sup> ETO <sup>100</sup>        | 20.24 ± 10.16     | 101 ± 14 | 5.35 ± 0.17 (3.8)   | 103 ± 12 | 5.11 ± 0.83 (4.0)   |
| SHEP <sup>r</sup> VCR <sup>10</sup>         | 20.95 ± 1.45      | 99 ± 9   | 8.31 ± 1.55 (2.5)   | 107 ± 13 | 3.64 ± 0.09 (5.8)   |
| <i>SK-N-AS</i>                              | 3.55 ± 0.21       | 107 ± 3  | 1.01 ± 0.26 (3.5)   | 97 ± 9   | 1.31 ± 0.11 (2.7)   |
| <i>SK-N-SH</i>                              | 74.94 ± 19.52     | 91 ± 12  | 6.80 ± 0.83 (11.0)  | 94 ± 6   | 1.72 ± 0.15 (43.6)  |
| <i>UKF-NB-2</i>                             | 4.18 ± 0.27       | 93 ± 8   | 4.55 ± 0.32 (0.9)   | 99 ± 5   | 2.85 ± 0.14 (1.5)   |
| UKF-NB-2 <sup>r</sup> CARBO <sup>2000</sup> | 318.21 ± 42.68    | 106 ± 14 | 114.7 ± 14.6 (2.8)  | 113 ± 19 | 7.67 ± 1.29 (41.5)  |
| UKF-NB-2 <sup>r</sup> OXALI <sup>600</sup>  | 3.25 ± 0.64       | 89 ± 10  | 5.90 ± 0.97 (0.6)   | 109 ± 16 | 3.00 ± 0.73 (1.1)   |
| <i>UKF-NB-3</i>                             | 0.49 ± 0.10       | 90 ± 9   | 0.61 ± 0.13 (0.8)   | 102 ± 6  | 0.74 ± 0.10 (0.7)   |
| UKF-NB-3 <sup>r</sup> CARBO <sup>2000</sup> | 155.36 ± 24.6     | 101 ± 8  | 20.50 ± 3.79 (7.6)  | 88 ± 11  | 9.20 ± 1.62 (16.9)  |
| UKF-NB-3 <sup>r</sup> CDDP <sup>1000</sup>  | 5.32 ± 1.21       | 93 ± 18  | 13.85 ± 1.42 (0.4)  | 102 ± 6  | 18.55 ± 1.34 (0.3)  |
| UKF-NB-3 <sup>r</sup> DOCE <sup>10</sup>    | 469.60 ± 113.08   | 105 ± 10 | 32.60 ± 7.85 (14.4) | 113 ± 9  | 0.50 ± 0.04 (939)   |
| UKF-NB-3 <sup>r</sup> DOX <sup>20</sup>     | 15,700.05 ± 1,019 | 92 ± 7   | 34.40 ± 11.73 (456) | 107 ± 15 | 1.70 ± 0.49 (9235)  |
| UKF-NB-3 <sup>r</sup> ETO <sup>200</sup>    | 7.97 ± 0.13       | 98 ± 17  | 4.40 ± 0.27 (1.8)   | 101 ± 14 | 5.00 ± 0.14 (1.6)   |
| UKF-NB-3 <sup>r</sup> GEMCI <sup>10</sup>   | 0.40 ± 0.01       | 91 ± 12  | 0.50 ± 0.04 (0.8)   | 104 ± 18 | 0.50 ± 0.06 (0.8)   |
| UKF-NB-3 <sup>r</sup> OXALI <sup>4000</sup> | 1.80 ± 0.78       | 95 ± 9   | 0.97 ± 0.09 (1.9)   | 105 ± 10 | 1.08 ± 0.14 (1.7)   |
| UKF-NB-3 <sup>r</sup> TOPO <sup>20</sup>    | 7.40 ± 0.71       | 103 ± 5  | 2.00 ± 0.05 (3.7)   | 109 ± 13 | 5.13 ± 0.84 (1.4)   |
| UKF-NB-3 <sup>r</sup> VCR <sup>10</sup>     | 26.59 ± 6.37      | 94 ± 5   | 1.95 ± 0.28 (13.6)  | 115 ± 14 | 1.35 ± 0.21 (19.7)  |
| <i>UKF-NB-6</i>                             | 0.65 ± 0.09       | 101 ± 4  | 0.58 ± 0.07 (1.1)   | 107 ± 6  | 0.57 ± 0.07 (1.1)   |
| UKF-NB-6 <sup>r</sup> CARBO <sup>2000</sup> | 16.83 ± 1.62      | 97 ± 13  | 13.31 ± 2.79 (1.3)  | 103 ± 12 | 7.27 ± 2.17 (2.3)   |
| UKF-NB-6 <sup>r</sup> CDDP <sup>2000</sup>  | 79.93 ± 7.14      | 94 ± 11  | 21.72 ± 1.87 (3.7)  | 105 ± 2  | 13.30 ± 6.47 (6.0)  |
| UKF-NB-6 <sup>r</sup> DOCE <sup>10</sup>    | 14.33 ± 4.08      | 92 ± 14  | 5.48 ± 1.01 (2.6)   | 101 ± 18 | 1.83 ± 0.03 (7.8)   |
| UKF-NB-6 <sup>r</sup> DOX <sup>20</sup>     | 11.80 ± 1.56      | 99 ± 16  | 1.35 ± 0.35 (8.7)   | 99 ± 14  | 0.60 ± 0.07 (19.7)  |
| UKF-NB-6 <sup>r</sup> ETO <sup>200</sup>    | 3.60 ± 0.01       | 101 ± 19 | 0.50 ± 0.04 (7.2)   | 104 ± 7  | 1.24 ± 0.47 (2.9)   |
| UKF-NB-6 <sup>r</sup> GEMCI <sup>10</sup>   | 2.10 ± 0.84       | 110 ± 3  | 1.54 ± 0.10 (1.4)   | 106 ± 9  | 1.36 ± 0.61 (1.5)   |
| UKF-NB-6 <sup>r</sup> OXALI <sup>4000</sup> | 5.34 ± 0.71       | 96 ± 10  | 3.47 ± 0.07 (1.5)   | 89 ± 7   | 3.04 ± 0.73 (1.8)   |
| UKF-NB-6 <sup>r</sup> TOPO <sup>20</sup>    | 3.47 ± 0.81       | 91 ± 4   | 1.00 ± 0.08 (3.5)   | 107 ± 10 | 1.35 ± 0.78 (2.6)   |

|                              |                |         |                    |          |                    |
|------------------------------|----------------|---------|--------------------|----------|--------------------|
| UKF-NB-6\VCR <sup>10</sup>   | 49.30 ± 2.24   | 104 ± 5 | 3.60 ± 0.12 (13.7) | 103 ± 16 | 0.70 ± 0.10 (70.4) |
| UKF-NB-6\VINOR <sup>40</sup> | 228.52 ± 41.54 | 95 ± 8  | 8.63 ± 1.01 (26.5) | 100 ± 19 | 0.74 ± 0.06 (309)  |

<sup>1</sup> effect of verapamil (5µM) or zosuquidar (1.25µM) alone on cell viability presented as percentage (mean ± S.D.) relative to untreated control

<sup>2</sup> fold sensitisation (YM155 IC<sub>50</sub>/ YM155 IC<sub>50</sub> in the presence of ABCB1 inhibitor)