

**Table S1.** Summary of compound concentrations and growth inhibition in yeast deletion pools compared with samples grown in the presence of 0.4% DMSO solvent.

| Compound        | Hapl. conc. | %growth (hapl.) | Dipl. conc. | % Growth (dipl.) | Array ID     |
|-----------------|-------------|-----------------|-------------|------------------|--------------|
| <b>e</b>        | 5.0 $\mu$ M | 91.46%          | 4.0 $\mu$ M | 80.74%           | YBC10<br>17  |
|                 | 5.5 $\mu$ M | 77.56%          | 5.5 $\mu$ M | 85.85%           | YBC10<br>18  |
| <b>U0126</b>    | 100 $\mu$ M | 90.02%          | 100 $\mu$ M | 80.70%           | 137742<br>42 |
|                 | 125 $\mu$ M | 89.66%          | 125 $\mu$ M | 69.84%           | 137742<br>43 |
| <b>SEW01049</b> | 30 $\mu$ M  | 91.22%          | 30 $\mu$ M  | 93.11%           | YBC10<br>19  |
|                 | 40 $\mu$ M  | 83.78%          | 40 $\mu$ M  | 90.63%           | YBC10<br>20  |
| <b>SPB07427</b> | 1.5 $\mu$ M | 77.73%          | 1.5 $\mu$ M | 81.48%           | 137742<br>21 |
|                 | 2.0 $\mu$ M | 71.95%          | 2.0 $\mu$ M | 72.68%           | 137742<br>46 |
| <b>DP00477</b>  | 2.0 $\mu$ M | 78.78%          | 2.0 $\mu$ M | 79.11%           | 137742<br>32 |
|                 | 3.0 $\mu$ M | 57.56%          | 3.0 $\mu$ M | 51.97%           | 137742<br>85 |
| <b>JFD00692</b> | 35 $\mu$ M  | 78.81%          | 30 $\mu$ M  | 75.27%           | 137742<br>30 |
|                 | 40 $\mu$ M  | 75.56%          | 35 $\mu$ M  | 68.55%           | 137742<br>33 |
| <b>RJF01649</b> | 20 $\mu$ M  | 73.39%          | 20 $\mu$ M  | 73.20%           | 137742<br>44 |
|                 | 25 $\mu$ M  | 69.05%          | 25 $\mu$ M  | 66.22%           | 137742<br>45 |
| <b>PD184</b>    | 14 $\mu$ M  | 94.00%          | 14 $\mu$ M  | 97.00%           | 137742<br>23 |
| <b>CI-1040</b>  | 50 $\mu$ M  | 93.00%          | 50 $\mu$ M  | 97.00%           | 137742<br>24 |

Conc., concentration; dipl., diploid; hapl., haploid.