

Gliomas viability results with p values

**U87**

| short | 0.05 uM     | 0.1uM       | 0.5uM       | 1uM         | 5uM         | 10uM        |
|-------|-------------|-------------|-------------|-------------|-------------|-------------|
|       | 79.04611608 | 65.94864891 | 48.50078906 | 32.13770555 | 13.23204154 | 5.519761516 |
|       | 70.82992306 | 65.00453309 | 49.58258307 | 31.42339075 | 3.245693563 | 1.922030825 |
|       | 91.87155717 | 70.73108166 | 39.82265216 | 35.58785806 | 2.855921334 | 2.086361693 |
|       |             | 82.30552197 |             | 37.23594286 | 3.294951308 |             |
|       |             |             |             |             | 4.383657724 |             |
|       |             |             |             |             | 9.117695204 |             |
| ave   | 80.5825321  | 70.99744641 | 45.96867476 | 34.0962243  | 6.021660113 | 3.176051345 |

| long | 0.05 uM     | 0.1uM       | 0.5uM       | 1uM         | 5uM         | 10uM        |
|------|-------------|-------------|-------------|-------------|-------------|-------------|
|      | 57.86428196 | 70.23752284 | 38.68139576 | 35.71497259 | 4.673526301 | 8.750841427 |
|      | 58.8476019  | 64.64188577 | 44.63905713 | 30.55303717 | 2.756119674 | 8.431550317 |
|      | 83.75654978 | 66.83197948 | 48.79752788 | 30.71398033 | 2.342881573 | 6.943138093 |
|      |             | 75.0772538  |             | 45.06247481 | 2.840610205 |             |
|      |             |             |             |             | 9.903421182 |             |
|      |             |             |             |             | 13.16673384 |             |
| ave  | 66.82281121 | 69.19716047 | 44.03932692 | 35.51111623 | 5.947215463 | 8.041843279 |

| dual | 0.05 uM     | 0.1uM       | 0.5uM       | 1uM         | 5uM         | 10uM        |
|------|-------------|-------------|-------------|-------------|-------------|-------------|
|      | 54.53270209 | 48.10077892 | 21.46238822 | 7.135301471 | 4.077315126 | 1.500144245 |
|      | 59.63332788 | 43.51767906 | 24.24292028 | 10.87941976 | 3.934723481 | 1.84950136  |
|      | 59.84146178 | 51.20136811 | 33.07805992 | 12.55237281 | 4.018811458 | 1.744335186 |
|      |             | 49.97984684 |             |             | 2.700333158 |             |
|      |             |             |             |             | 9.805205435 |             |
|      |             |             |             |             | 24.02257154 |             |
| ave  | 58.00249725 | 48.19991823 | 26.26112281 | 10.18903135 | 8.093160034 | 1.697993597 |

quadruple verse long peptide version and quadruple verse short peptide version

| 1 tailed     | 0.05 uM | 0.1uM  | 0.5uM | 1uM    | 5uM    | 10uM   |
|--------------|---------|--------|-------|--------|--------|--------|
| quad v short | 0.0285  | 0.003  | 0.007 | 0.0001 | 0.2991 | 0.1672 |
| quad v long  | 0.2039  | 0.0002 | 0.009 | 0.001  | 0.2951 | 0.003  |
| 2 tailed     | 0.05 uM | 0.1uM  | 0.5uM | 1uM    | 5uM    | 10uM   |
| quad v short | 0.0570  | 0.006  | 0.01  | 0.0002 | 0.5982 | 0.3345 |
| quad v long  | 0.4079  | 0.0004 | 0.02  | 0.002  | 0.5902 | 0.0062 |

**SJGBM2**

| 0.05 uM     | 0.1uM       | 0.5uM       | 1uM         | 5uM         | 10uM        |
|-------------|-------------|-------------|-------------|-------------|-------------|
| 82.47248095 | 81.28615932 | 29.09963308 | 22.85269248 | 4.138851802 | 1.57988429  |
| 85.0933908  | 82.49940528 | 27.83764368 | 33.92276584 | 13.70232337 | 7.374514313 |
| 98.02498992 | 81.28615932 | 48.79752788 | 22.85269248 | 4.138851802 | 1.57988429  |
| 83.75654978 | 80.30031376 |             | 21.29090094 | 4.392649036 | 1.456745854 |
|             | 75.0772538  |             | 45.06247481 | 4.685294948 |             |
|             |             |             |             | 7.124042146 |             |
| 87.33685286 | 80.0898583  | 35.24493488 | 29.19630531 | 6.36366885  | 2.997757187 |

| 0.05 uM     | 0.1uM       | 0.5uM       | 1uM         | 5uM         | 10uM        |
|-------------|-------------|-------------|-------------|-------------|-------------|
| 77.50493932 | 86.24216953 | 24.4425628  | 36.2064864  | 4.21853937  | 6.058203156 |
| 83.70450192 | 78.37116155 | 24.84434866 | 22.14063195 | 2.091677793 | 2.447708055 |
| 91.87155717 | 80.36754818 | 39.82265216 | 19.74450919 | 2.151501569 | 2.487673689 |
|             | 82.30552197 |             | 38.10291549 | 3.27406153  |             |
|             |             |             |             | 5.806992337 |             |
|             |             |             |             | 10.13032379 |             |
| 84.3603328  | 81.82160031 | 29.70318787 | 29.04863576 | 4.612182732 | 3.6645283   |

| 0.05 uM     | 0.1uM       | 0.5uM       | 1uM         | 5uM         | 10uM        |
|-------------|-------------|-------------|-------------|-------------|-------------|
| 44.425628   | 42.77218301 | 15.58001693 | 12.8776465  | 5.312822139 | 7.326936801 |
| 57.67480843 | 39.98664887 | 22.30603448 | 8.767245216 | 1.691143747 | 2.759234535 |
| 59.84146178 | 36.75481847 | 33.07805992 | 6.9027342   | 1.38951143  | 2.375616316 |
|             | 49.97984684 |             |             | 1.919277448 |             |
|             |             |             |             | 4.585727969 |             |
|             |             |             |             | 24.02257154 |             |
| 53.98063273 | 42.3733743  | 23.65470378 | 9.515875305 | 6.48684238  | 4.153929217 |

verse long peptide version and quadruple verse short peptide version

| 1 tailed     | 0.05 uM | 0.1uM   | 0.5uM       | 1uM   | 5uM         | 10uM        |
|--------------|---------|---------|-------------|-------|-------------|-------------|
| quad v short | 0.003   | 0.00009 | 0.124462592 | 0.005 | 0.48781694  | 0.308506403 |
| quad v long  | 0.005   | 0.00004 | 0.223556951 | 0.01  | 0.318507556 | 0.409378158 |
| 2 tailed     | 0.05 uM | 0.1uM   | 0.5uM       | 1uM   | 5uM         | 10uM        |
| quad v short | 0.005   | 0.0002  | 0.248925183 | 0.01  | 0.97563388  | 0.617012805 |
| quad v long  | 0.009   | 0.00008 | 0.447113902 | 0.02  | 0.637015111 | 0.818756315 |

### NP53

|       | 0.01   | 0.05 uM     | 0.1uM       | 0.5uM       | 1uM         | 5uM         |
|-------|--------|-------------|-------------|-------------|-------------|-------------|
| short | 110.53 | 78.11508836 | 50.33557047 | 34.07340281 | 18.56823266 | 12.52796421 |

|        |             |             |             |             |             |
|--------|-------------|-------------|-------------|-------------|-------------|
| 104.38 | 76.27869513 | 28.11877242 | 44.62343939 | 5.201275409 | 0.657632523 |
| 103.6  | 50.65088757 | 27.53579654 | 38.34319527 | 6.168018424 | 0.740963252 |
| 96.75  | 91.49710282 | 52.18934911 | 20.94057405 | 29.82248521 | 3.715450838 |
|        |             | 89.77226789 |             | 11.48093249 | 20.78131293 |
|        |             |             |             |             | 1.420118343 |

|     |         |             |             |             |             |             |
|-----|---------|-------------|-------------|-------------|-------------|-------------|
| ave | 103.815 | 74.13544347 | 49.59035129 | 34.49515288 | 14.24818884 | 6.640573682 |
|-----|---------|-------------|-------------|-------------|-------------|-------------|

|      |        |             |             |             |             |             |
|------|--------|-------------|-------------|-------------|-------------|-------------|
|      | 0.01   | 0.05 uM     | 0.1uM       | 0.5uM       | 1uM         | 5uM         |
| long | 145.32 | 104.576348  | 49.44071588 | 59.17535116 | 46.23415362 | 3.579418345 |
|      | 142.72 | 102.8594442 | 19.41012356 | 64.76037052 | 4.802710243 | 0.278995616 |
|      | 103    | 96.92307692 | 25.91368779 | 42.24852071 | 6.188044458 | 0.300390508 |
|      | 104.48 | 99.90567309 | 88.87573964 | 13.79867942 | 36.44970414 | 1.449932034 |
|      |        |             | 78.85729686 |             | 5.174504784 | 19.17035844 |
|      |        |             |             |             |             | 5.798816568 |

|     |        |             |             |             |             |             |
|-----|--------|-------------|-------------|-------------|-------------|-------------|
| ave | 123.88 | 101.0661356 | 52.49951275 | 44.99573045 | 19.76982345 | 5.096318585 |
|-----|--------|-------------|-------------|-------------|-------------|-------------|

|           |       |             |             |             |             |             |
|-----------|-------|-------------|-------------|-------------|-------------|-------------|
|           | 0.01  | 0.05 uM     | 0.1uM       | 0.5uM       | 1uM         | 5uM         |
| quadruple | 93.75 | 44.40416855 | 22.5950783  | 26.64250113 | 8.053691275 | 2.013422819 |
|           | 88.04 | 64.6798228  | 15.56396971 | 42.3681031  | 1.394978079 | 0.219210841 |
|           | 68.67 | 39.52662722 | 14.57895264 | 37.75147929 | 1.441874437 | 0.440572745 |
|           | 70.39 | 55.38337151 | 37.63313609 | 11.58873467 | 23.90532544 | 1.631173539 |
|           |       |             | 46.00458159 |             | 5.821317882 | 19.81474023 |
|           |       |             |             |             |             | 10.65088757 |

|     |         |             |             |             |             |             |
|-----|---------|-------------|-------------|-------------|-------------|-------------|
| ave | 80.2125 | 50.99849752 | 27.27514367 | 29.58770455 | 8.123437423 | 5.795001292 |
|-----|---------|-------------|-------------|-------------|-------------|-------------|

verse long peptide version and quadruple verse short peptide version

|              |      |         |             |             |             |             |
|--------------|------|---------|-------------|-------------|-------------|-------------|
| 1 tailed     | 0.01 | 0.05 uM | 0.1uM       | 0.5uM       | 1uM         | 5uM         |
| quad v short | 0.01 | 0.04    | 0.066783689 | 0.292951612 | 0.174936397 | 0.429880274 |
| quad v long  | 0.01 | 0.001   | 0.075741611 | 0.150606871 | 0.142445017 | 0.438037732 |
| 2 tailed     |      |         |             |             |             |             |
| quad v short | 0.03 | 0.07    | 0.133567378 | 0.585903223 | 0.349872793 | 0.859760548 |
| quad v long  | 0.02 | 0.002   | 0.151483221 | 0.301213741 | 0.284890034 | 0.876075463 |

| U87                  | Quadruple conjugate IC50 data |             |             |        | VSMC                    |
|----------------------|-------------------------------|-------------|-------------|--------|-------------------------|
|                      | short                         | long        | dual        |        |                         |
|                      | ic50                          | IC50        | IC50        |        |                         |
|                      |                               | 0.289       | 0.525       | 0.096  |                         |
|                      |                               | 0.417       | 0.329       | 0.072  |                         |
|                      |                               | 0.541       | 0.578       | 0.106  |                         |
|                      |                               | 0.457       | 0.139       | 0.067  |                         |
|                      |                               | 0.402       | 0.189       | 0.087  |                         |
|                      |                               | 0.455       | 0.582       | 0.096  |                         |
| ave                  | 0.426833333                   | 0.390333333 | 0.087333333 |        | 2.4653                  |
| st dev               | 0.083004618                   | 0.198773908 | 0.015148157 |        | 0.23325696              |
| sem                  | 0.033886494                   | 0.081149108 | 0.006184209 |        | 0.09522676              |
| p value quad v long  |                               |             |             | 0.013  | p value quad verse vsmc |
| p value v quad short |                               |             |             | 0.0001 | 0.003                   |

| U87  | ave technical and biological replicates |             |      |            |       |            |  |       |
|------|-----------------------------------------|-------------|------|------------|-------|------------|--|-------|
|      | short                                   |             | long |            | dual  |            |  |       |
|      | 0.01                                    | 97.56818487 | 0.01 | 98.0249899 | 0.01  | 92.5164584 |  |       |
|      | 0.05                                    | 80.5825321  | 0.05 | 66.8228112 | 0.05  | 58.0024972 |  |       |
|      | 0.1                                     | 70.99744641 | 0.1  | 69.1971605 | 0.1   | 48.1999182 |  |       |
|      | 0.5                                     | 45.96867476 | 0.5  | 44.0393269 | 0.5   | 26.2611228 |  |       |
|      | 1                                       | 34.31296746 | 1    | 35.5111162 | 1     | 10.1890313 |  |       |
|      | 5                                       | 7.16088886  | 5    | 5.94721546 | 5     | 8.09316003 |  |       |
|      | 10                                      | 3.176051345 | 10   | 8.04184328 | 10    | 1.6979936  |  |       |
| IC50 |                                         | 0.379       | IC50 |            | 0.288 | IC50       |  | 0.083 |

IC50s reported are the average of all biological replicates.

The IC50 from the ave of all technical and bio replicates was determined for comparison

| SJGBM2               | VSMC IC50s  |             |             |            |
|----------------------|-------------|-------------|-------------|------------|
|                      | short       | long        | dual        | quad       |
|                      | ic50        | ic50        | ic50        |            |
|                      |             | 0.496       | 0.575       | 0.071      |
|                      |             | 0.354       | 0.346       | 0.063      |
|                      |             | 0.33        | 0.316       | 0.057      |
|                      |             | 0.214       | 0.19        | 0.034      |
|                      |             | 0.213       | 0.166       | 0.07       |
|                      |             | 0.582       | 0.428       | 0.09       |
| ave                  | 0.364833333 | 0.336833333 | 0.064166667 | 2.4653     |
| st dev               | 0.149332403 | 0.152510218 | 0.018497748 | 0.23325696 |
| sem                  | 0.060964698 | 0.062262036 | 0.007551674 | 0.08816284 |
| p value quad v long  |             |             |             | 0.0069     |
| p value v quad short |             |             |             | 0.0041     |
|                      |             |             |             | 0.003      |

| SJGBM2 | ave technicaql and biological replicates |             |      |            |      |            |
|--------|------------------------------------------|-------------|------|------------|------|------------|
|        | short                                    |             | long |            | dual |            |
|        | 0.01                                     | 98.02498992 | 0.01 | 97.5681849 | 0.01 | 92.5164584 |
|        | 0.05                                     | 83.77414051 | 0.05 | 84.3603328 | 0.05 | 53.9806327 |
|        | 0.1                                      | 79.79078304 | 0.1  | 81.8216003 | 0.1  | 42.3733743 |
|        | 0.5                                      | 35.24493488 | 0.5  | 29.7031879 | 0.5  | 23.6547038 |
|        | 1                                        | 30.78220852 | 1    | 29.0486358 | 1    | 9.5158753  |
|        | 5                                        | 7.868315857 | 5    | 4.61218273 | 5    | 6.48684238 |
|        | 10                                       | 3.470381486 | 10   | 3.6645283  | 10   | 4.15392922 |
|        | IC50                                     | 0.331       | IC50 | 0.301      | IC50 | 0.064      |

| NP53                 | short       | long        | dual        | VSMC IC50s<br>quad      |
|----------------------|-------------|-------------|-------------|-------------------------|
|                      | ic50        | ic50        | ic50        |                         |
|                      | 0.032       | 0.202       | 0.013       |                         |
|                      | 0.102       | 0.01        | 0.023       |                         |
|                      | 0.026       | 0.021       | 0.023       |                         |
|                      | 0.183       | 0.54        | 0.029       |                         |
|                      | 0.343       | 0.571       | 0.236       |                         |
|                      | 0.103       | 0.432       | 0.042       |                         |
|                      | 0.257       | 0.183       | 0.076       | 2.2744                  |
|                      |             |             |             | 2.7253                  |
|                      |             |             |             | 2.3962                  |
| ave                  | 0.149428571 | 0.279857143 | 0.063142857 | 2.4653                  |
| st dev               | 0.118037928 | 0.234825771 | 0.078946033 | 0.23325696              |
| sem                  | 0.044614143 | 0.088755799 | 0.029838796 | 0.08816284              |
| p value quad v long  |             |             | 0.052       | p value quad verse vsmc |
| p value v quad short |             |             | 0.069       | 0.002                   |

| NP53 | ave technicaql and biological replicates |             |  |      |            |      |            |
|------|------------------------------------------|-------------|--|------|------------|------|------------|
|      | short                                    |             |  | long |            | dual |            |
|      | 0.01                                     | 103.8153999 |  | 0.01 | 124.13419  | 0.01 | 80.209991  |
|      | 0.05                                     | 74.13544347 |  | 0.05 | 101.066136 | 0.05 | 50.9984975 |
|      | 0.1                                      | 49.59035129 |  | 0.1  | 52.4995127 | 0.1  | 27.2751437 |
|      | 0.5                                      | 34.49515288 |  | 0.5  | 44.9957305 | 0.5  | 29.5877045 |
|      | 1                                        | 14.24818884 |  | 1    | 18.376964  | 1    | 8.12343742 |
|      | 5                                        | 6.105356361 |  | 5    | 5.09631858 | 5    | 5.79500129 |
|      | 10                                       | 2.767666043 |  | 10   | 1.42628763 | 10   | 1.80454626 |
|      | IC50                                     | 0.132       |  | IC50 | 0.229      | IC50 | 0.043      |



glioma cell lines and VSMC data used for IC50 graphs

|                         |                     |        |                         |          |        |                         |         |        |          | VSMC   |
|-------------------------|---------------------|--------|-------------------------|----------|--------|-------------------------|---------|--------|----------|--------|
| shPep-1LnPep-1\quadrule |                     |        | shPep-1_nPep-1\quadrule |          |        | shPep-1_nPep-1\quadrule |         |        | Quadrupl |        |
|                         | 289                 | 525    | 96                      | 496      | 575    | 71                      | 102     | 202    | 13       | 2274.4 |
|                         | 417                 | 329    | 72                      | 354      | 346    | 63                      | 32      | 10     | 23       | 2725.3 |
|                         | 541                 | 578    | 106                     | 330      | 316    | 57                      | 26      | 21     | 23       | 2396.2 |
|                         | 457                 | 139    | 67                      | 214      | 190    | 34                      | 183     | 540    | 29       |        |
|                         | 402                 | 189    | 87                      | 213      | 166    | 80                      | 343     | 571    | 236      |        |
|                         | 455                 | 582    | 96                      | 582      | 428    | 90                      | 103     | 342    | 42       |        |
|                         |                     |        |                         |          |        |                         | 257     | 183    | 76       |        |
| ave                     | 426.83              | 390.3  | 87.33                   | 364.8    | 336.8  | 65.83                   | 149.4   | 267    | 63.14    | 2465   |
| st dev                  | 83.0046             | 198.77 | 15.148                  | 149.33   | 152.51 | 19.549                  | 118.038 | 227.46 | 78.946   | 233.26 |
| sem                     | 33.8865             | 81.149 | 6.1842                  | 60.965   | 62.262 | 7.9809                  | 48.1888 | 92.858 | 32.23    | 95.227 |
|                         |                     |        |                         |          |        |                         |         |        |          |        |
|                         | U87                 |        |                         | SJGBM2   |        |                         | NP53    |        |          |        |
|                         | both sig            |        |                         | both sig |        |                         |         |        |          |        |
| Anova w                 | sh v quac p=0.00076 |        |                         | p=0.0022 |        |                         | 0.56    |        |          |        |
| tukey                   | ln v quad 0.0021    |        |                         | p=0.0047 |        |                         | 0.059   |        |          |        |

VSMC data

|        | 0.01 | 0.1  | 0.1  | 0.5  | 1    | 5    | 10   | uM concentrations |
|--------|------|------|------|------|------|------|------|-------------------|
| exp1   | 84.9 | 61.5 | 58.1 | 64.3 | 59.2 | 17.4 | 11.0 |                   |
| exp2   | 91.2 | 91.1 | 85.7 | 59.9 | 60.7 | 19.1 | 8.3  |                   |
| exp3   | 86.0 | 79.7 | 80.9 | 52.6 | 56.8 | 22.6 | 8.5  |                   |
| ave    | 87.4 | 77.4 | 74.9 | 58.9 | 58.9 | 19.7 | 9.3  |                   |
| st dev | 3.4  | 14.9 | 14.8 | 5.9  | 2.0  | 2.6  | 1.5  |                   |
| sem    | 1.9  | 8.6  | 8.5  | 3.4  | 1.2  | 1.5  | 0.9  |                   |

| IC50   |       |      |
|--------|-------|------|
| uM     | nM    |      |
| 2.274  | 2274  |      |
| 2.725  | 2725  |      |
| 2.396  | 2396  |      |
| ave    | 2.465 | 2465 |
| st dev | 0.233 | 233  |
| sem    | 0.135 | 135  |

e

## PCC data

| C-dots-5-Amfl | C-dots-5-Amfl-shPep-1 | C-dots-5-Amfl-lnPep-1 | C-dots-5-Amfl-shPep-1-Ln-Pep1 |
|---------------|-----------------------|-----------------------|-------------------------------|
| 0.048045207   | -0.000230021          | 0.091961731           | 0.09590901                    |
| -0.011423782  | 0.015410324           | 0.112442584           | -0.035098952                  |
| -0.009570363  | -0.055290544          | 0.125539163           | 0.199917411                   |
| -0.092987696  | -0.001313469          | 0.149790163           | 0.061597267                   |
| 0.054586738   | 0.031147705           | 0.094900347           | 0.518448269                   |
| 0.040423878   | 0.090181482           | -0.014251507          | 0.487363339                   |
| 0.021292117   | 0.10458828            | -0.064001159          | 0.708781272                   |
| 0.023385279   | -0.096913363          | 0.073429755           | 0.473192664                   |
| 0.058849984   | 0.076255849           | 0.024331461           | -0.011373255                  |
| 0.002756336   | 0.015196163           | 0.094847895           | 0.382186312                   |
| 0.020166147   | 0.089033065           | 0.074477713           | 0.37966894                    |
| 0.049041173   | 0.06653753            | 0.12127142            | -0.057226719                  |
| 0.07909659    | 0.063556644           | -0.038802687          | 0.516977495                   |
| -0.086610856  | 0.148283986           | -0.202477787          | 0.046713628                   |
| -0.001050134  | 0.157922402           | -0.107527171          | 0.544811623                   |
| 0.062262701   | 0.105154414           | 0.004301267           | 0.817462198                   |
| -0.015430072  | 0.164525335           | -0.117620487          | 0.809740676                   |
| -0.076881796  | -0.021726129          | -0.015538934          | 0.230821028                   |
| -0.102485342  | -0.051765153          | -0.044999506          | 0.446281241                   |
| 0.008344765   | -0.034151499          | 0.271599998           | 0.447039067                   |
| 0.099223935   | 0.105375497           | -0.073758763          | -0.043622497                  |
| 0.064918305   | 0.041834922           | 0.079732521           | 0.234116956                   |
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