Supplementary Material

**Supplementary Table 1:** Statistical analysis of the invasion data of figure 1 using the Kruskal-Wallis test.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Cell line** | **value** | **p-value** | **h-statistic** | **significance** |
| **Rac1fl/fl vs Rac1-/-****FRAX597** | invasiveness | 1.81 E-114 | 267.67022 | \*\*\* |
| **Rac1fl/fl vs Rac1-/-****FRAX597** | depth | 3.99 E-121 | 320.970081 | \*\*\* |
| **Rac1fl/fl vs Rac1-/-****IP3** | invasiveness | 1.92 E-195 | 485.23022 | \*\*\* |
| **Rac1fl/fl vs Rac1-/-****IP3** | depth | 1.40 E-228 | 649.09700 | \*\*\* |

**Supplementary Table 2:** Statistical analysis of the magnetic tweezer data of figure 2 using the Kruskal-Wallis test.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Cell line** | **value** | **p-value** | **h-statistics** | **significance** |
| **Rac1fl/fl** | Stiffness | 1,80E-08 | 35,66357 | \*\*\* |
| **Rac1fl/fl** | beta | 0,84877 | 0,32793 | ns |
| **Rac1-/-** | Stiffness | 0,37486 | 1,96239 | ns |
| **Rac1-/-** | beta | 0,22295 | 3,00159 | ns |
| **Rac1fl/fl + Rac1-/-** | Stiffness | 8,18095 | 49,22288 | \*\*\* |
| **Rac1fl/fl + Rac1-/-** | beta | 1,67E-37 | 182,36196 | \*\*\* |

**Supplementary Table 3:** Statistical analysis of the optical stretcher data of figures 4 and 5 using the Kruskal-Wallis test.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **drug** | **laser power** | **p-value** | **h-statistics** | **significance** |
| **0** | 1.2 µM FRAX597 | 800 | 4,48E-73 | 338,5586 | \*\*\* |
| **1** | 1.2 µM FRAX597 | 1200 | 2,5E-156 | 722,7149 | \*\*\* |
| **2** | 12 µM IPA3 | 800 | 4,16E-98 | 454,1277 | \*\*\* |
| **3** | 12 µM IPA3 | 1200 | 1,4E-163 | 756,1667 | \*\*\* |