# Supplemental Materials

***Molecular Biology of the Cell***

Panagiotakopoulou et al.

# SUPPLEMENTARY INFORMATION

# for

# Cell cycle-dependent force transmission in cancer cells

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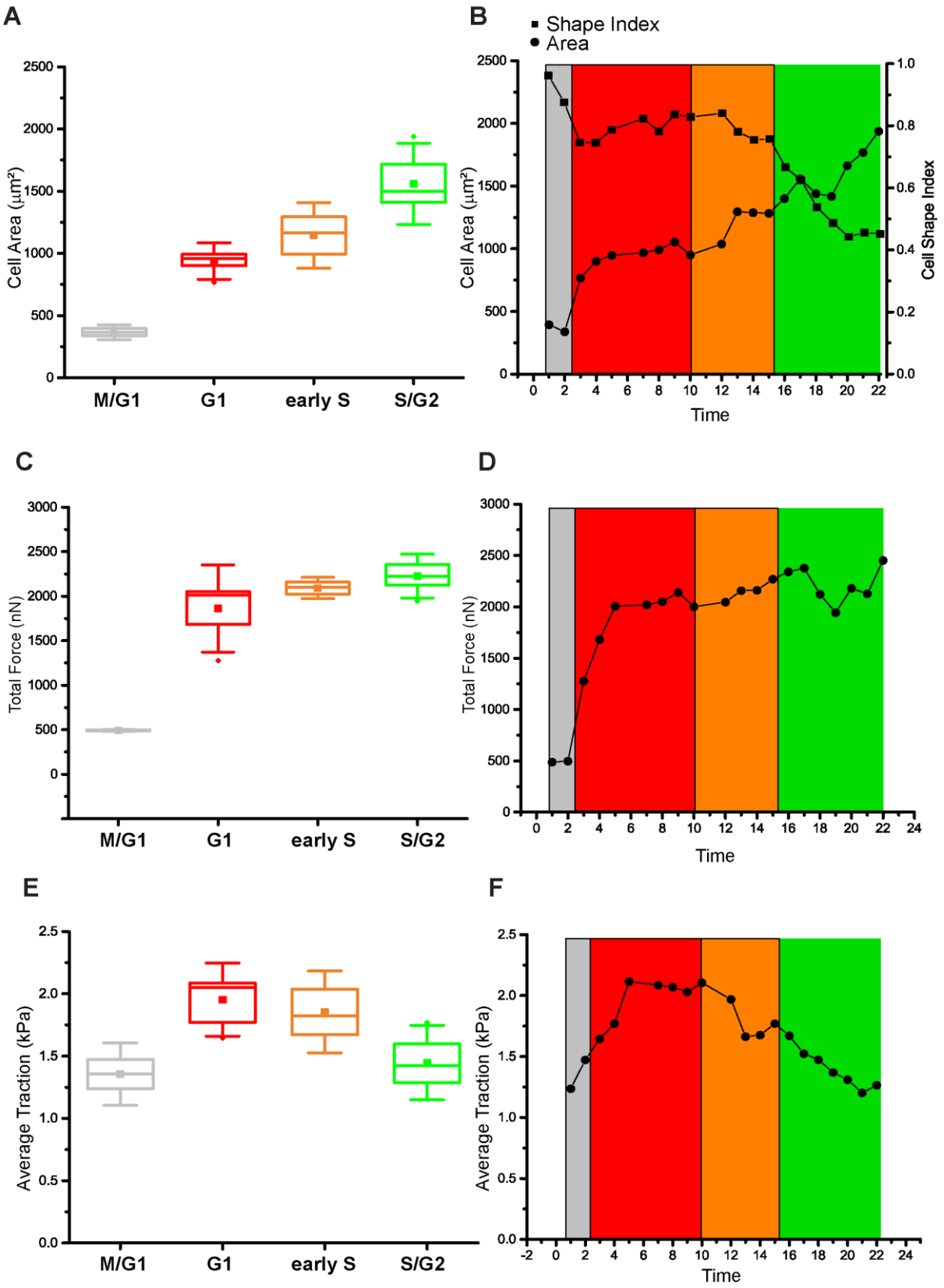
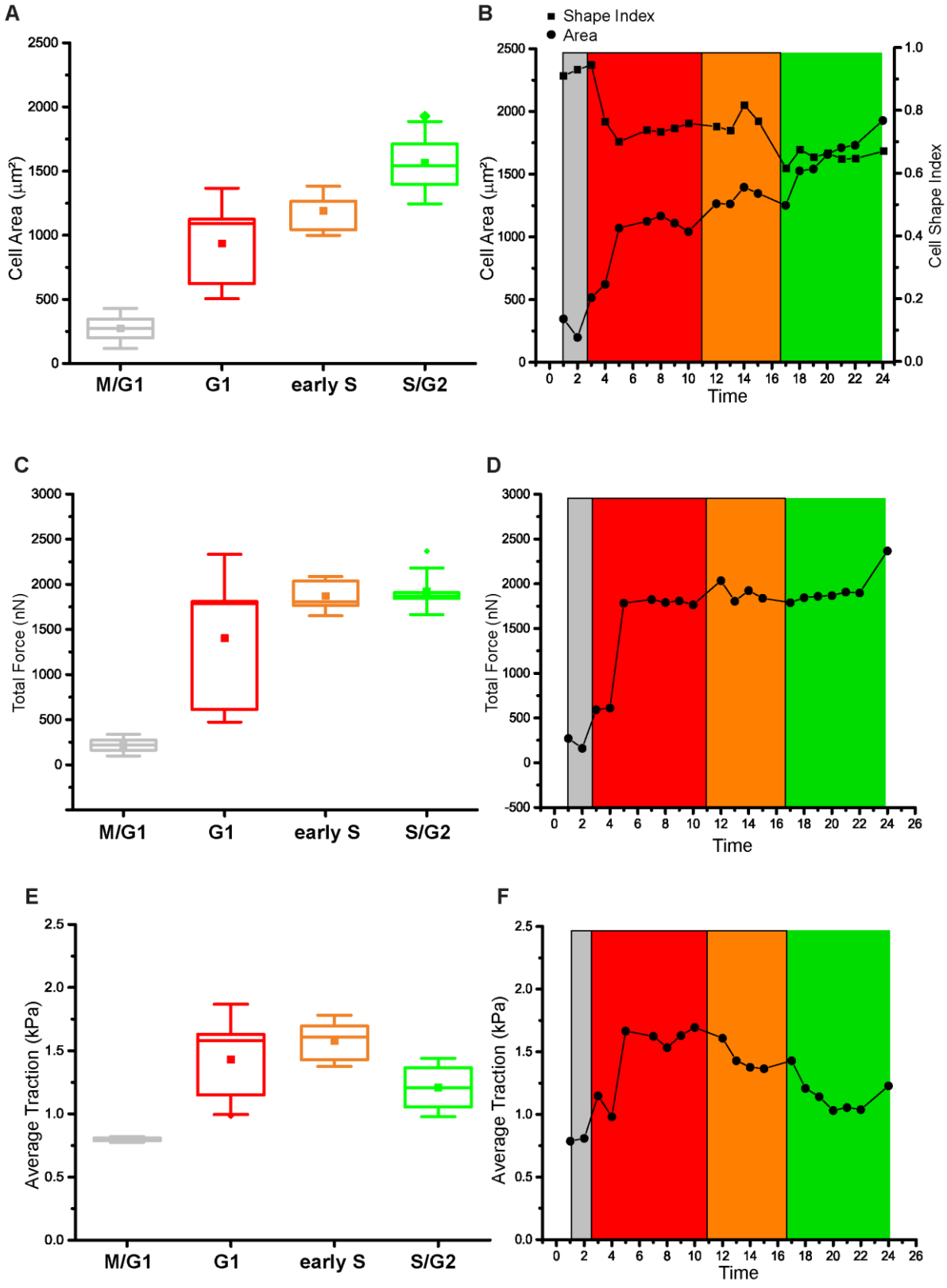
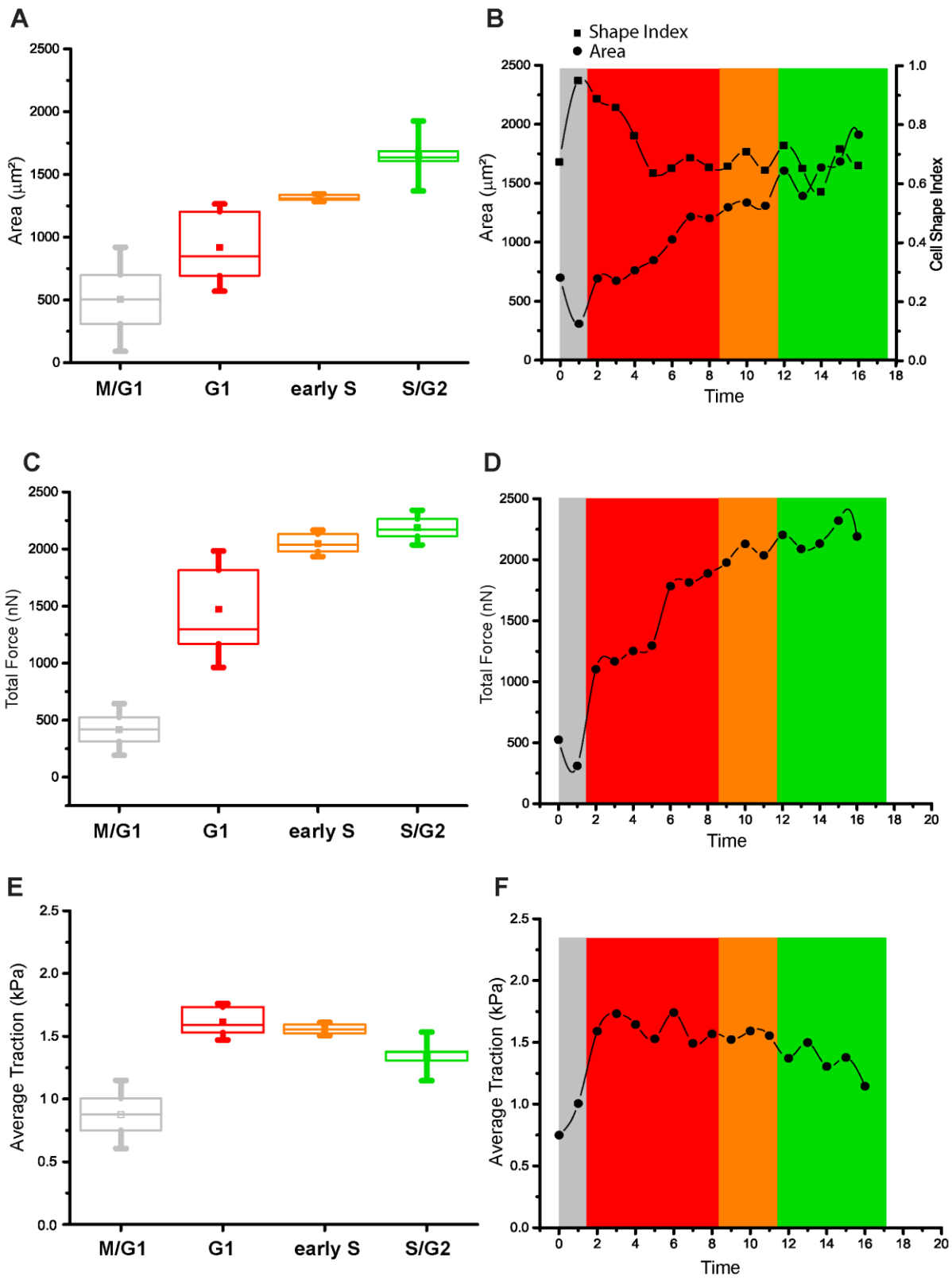
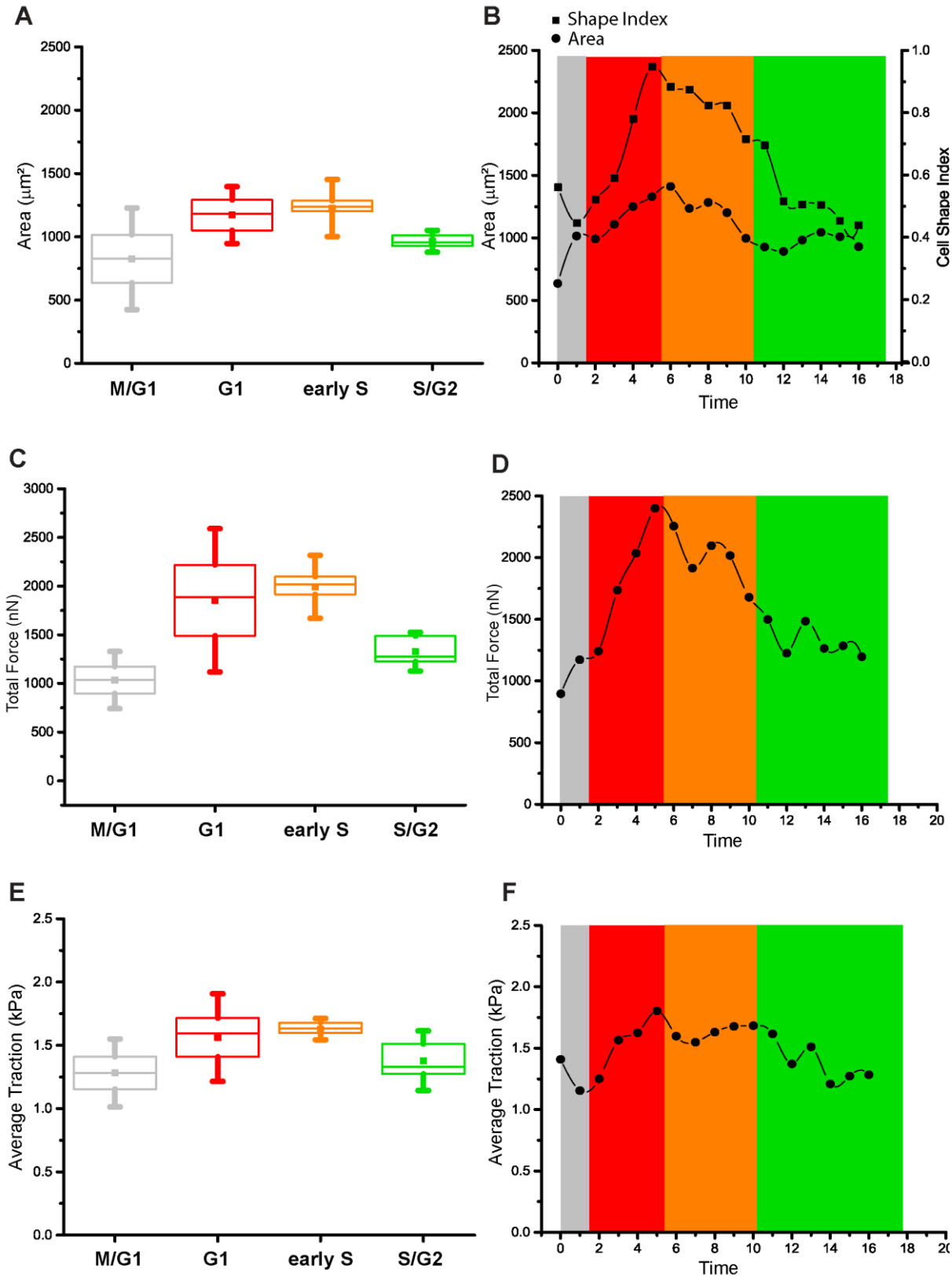

A
Cell Area (μm²)
2500
2000
1500
1000
500
0
M/G1
G1
early S
S/G2
B
Shape Index
Area
Cell Area (μm²)
Cell Shape Index
1.0
0.8
0.6
0.4
0.2
0.0
0 2 4 6 8 10 12 14 16 18 20 22
Time
C
Total Force (nN)
3000
2500
2000
1500
1000
500
0
M/G1
G1
early S
S/G2
D
Total Force (nN)
0 2 4 6 8 10 12 14 16 18 20 22 24
Time
E
Average Traction (kPa)
2.5
2.0
1.5
1.0
0.5
0.0
M/G1
G1
early S
S/G2
F
Average Traction (kPa)
-2 0 2 4 6 8 10 12 14 16 18 20 22 24
Time


A
Cell Area (μm²)
M/G1
G1
early S
S/G2
B
Shape Index
Area
Cell Area (μm²)
Cell Shape Index
Time
C
Total Force (nN)
M/G1
G1
early S
S/G2
D
Total Force (nN)
Time
E
Average Traction (kPa)
M/G1
G1
early S
S/G2
F
Average Traction (kPa)
Time


A
Area (μm²)
M/G1
G1
early S
S/G2
B
Shape Index
Area
Area (μm²)
Cell Shape Index
Time
C
Total Force (nN)
M/G1
G1
early S
S/G2
D
Total Force (nN)
Time
E
Average Traction (kPa)
M/G1
G1
early S
S/G2
F
Average Traction (kPa)
Time




**Figures S1-S4: Individual cell variability for cell area (A, B), forces (C, D) and tractions (E, F) for 4 distinct cells**

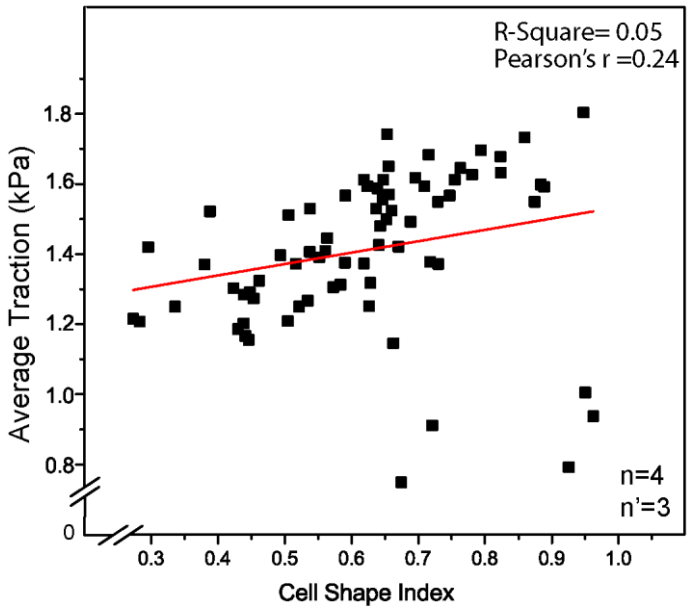



**Figure S5:** Correlation between cell shape and traction: The R-Square and Pearson's r values indicate that the two variables are not linearly correlated. n= number of cells and n' = number of independent experiments.

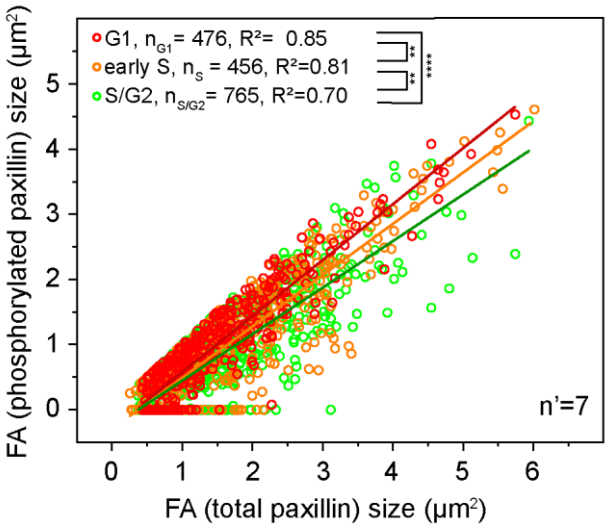



**Figure S6**: Correlation between the focal adhesion size (total paxillin) and the size of phosphorylated paxillin. **p<0.01. ****p<0.0001. n=number of individual focal adhesions for 7 independent experiments. n= number of cells and n' = number of independent experiments.

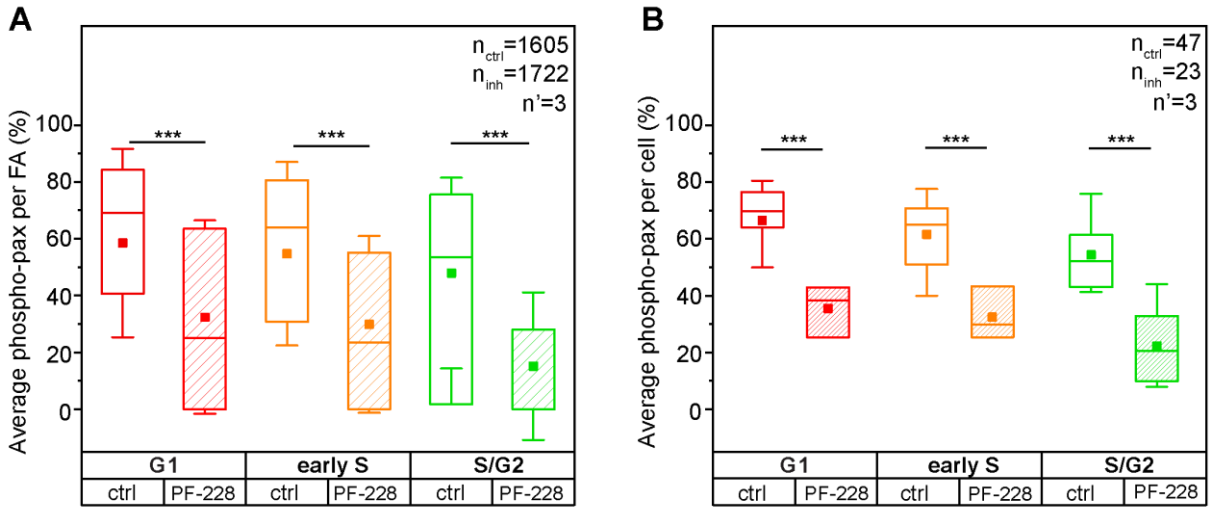



**Figure S7:** The effect of FAK inhibition on paxillin phosphorylation per focal adhesion **(A)** and per cell **(B)** ***p<0.001.Panel A: n=number of individual focal adhesions, Panel B: n= number of cells and n' = number of independent experiments.

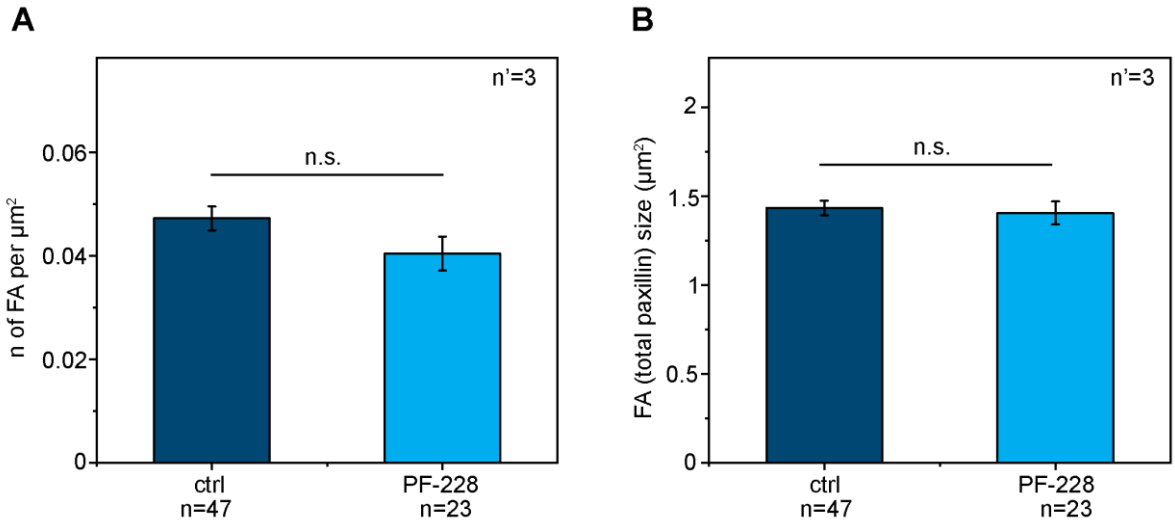



**Figure S8:** The effect of FAK inhibition on the number of focal adhesions per µm² **(A)** , and the average size of focal adhesions **(B)** n= number of cells and n' = number of independent experiments.

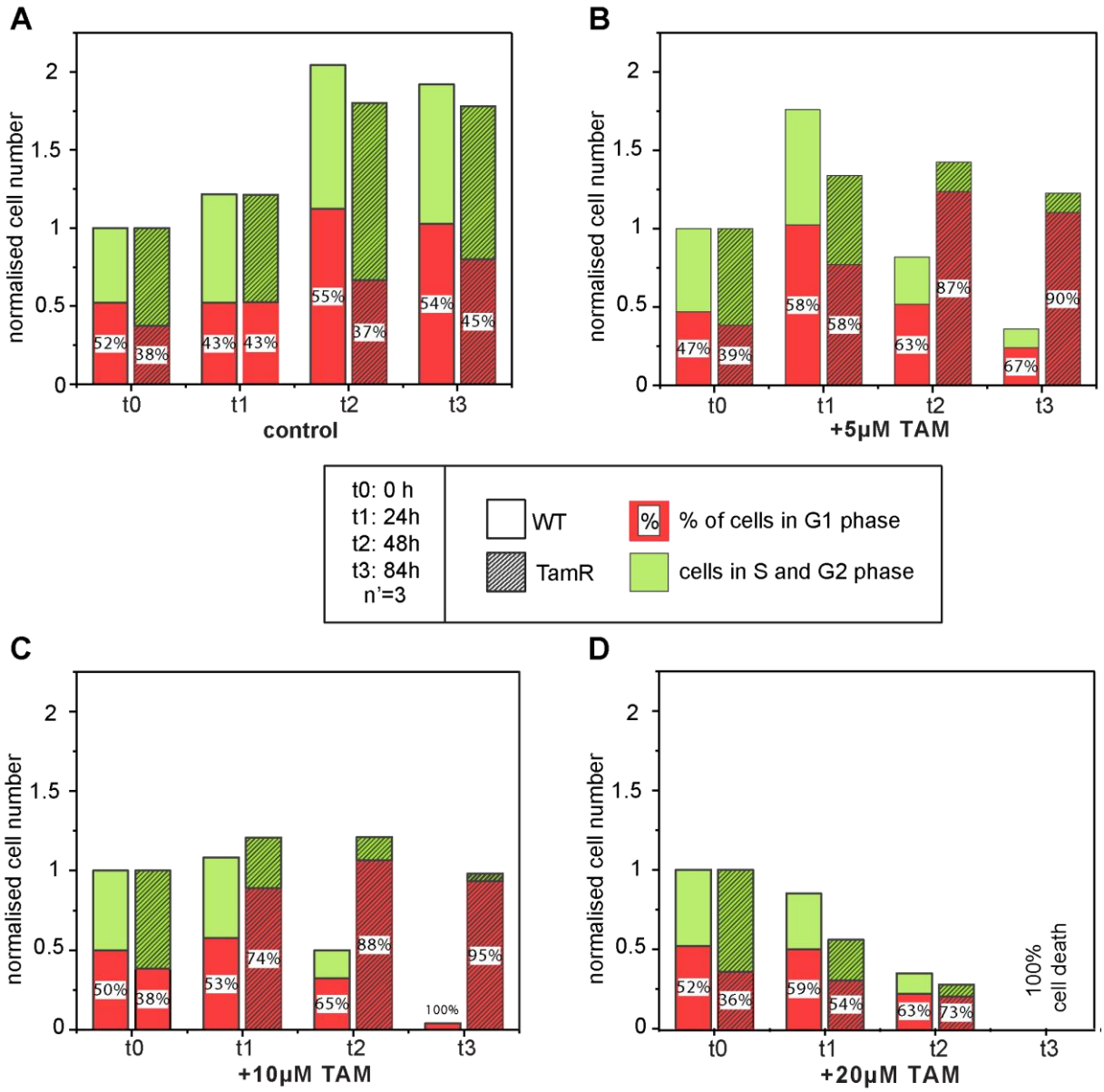



**Figure S9:** The effect of 4-hydroxytamoxifen on the cell cycle partition and viability for wild type and Tamoxifen-resistant MCF7 cells. Control (ethanol vehicle) (**A**), 5μM (**B**), 10 μM (**C**), and 20 μM (**D**) was added and monitored by live microscopy for a total duration of 84h.