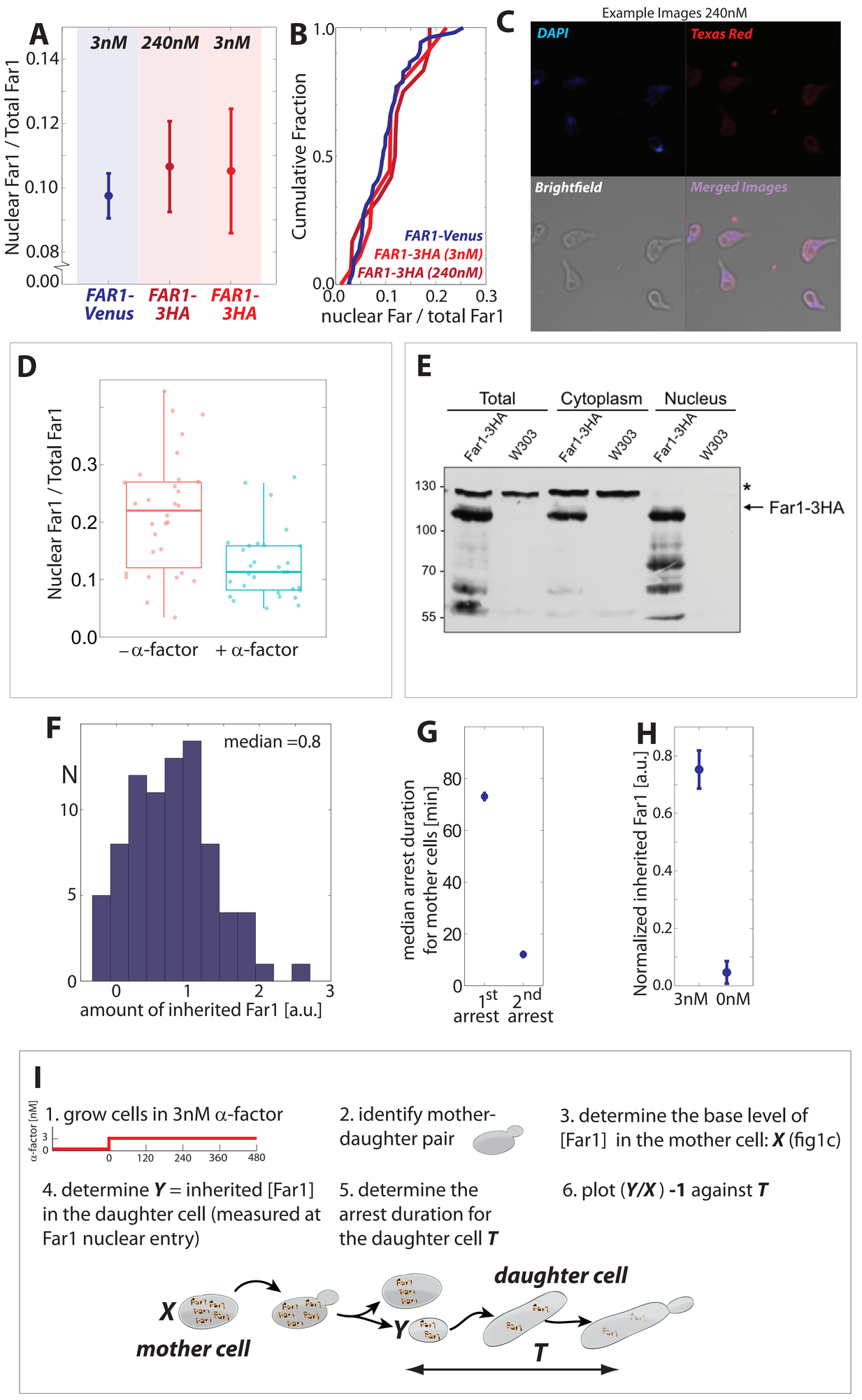
A
3nM
240nM
3nM
Nuclear Far1 / Total Far1
0.14
0.12
0.10
0.08
0.00
FAR1-Venus
FAR1-3HA
FAR1-3HA
B
Cumulative Fraction
1.0
0.5
0.0
FAR1-Venus
FAR1-3HA (3nM)
FAR1-3HA (240nM)
0.0
0.1
0.2
0.3
nuclear Far / total Far1
C
Example Images 240nM
DAPI
Texas Red
Brightfield
Merged Images
D
Nuclear Far1 / Total Far1
0.3
0.2
0.1
0.0
−α-factor
+α-factor
E
Total
Cytoplasm
Nucleus
Far1-3HA
W303
Far1-3HA
W303
Far1-3HA
W303
130
100
70
55
*
Far1-3HA
F
median =0.8
N
10
5
0
0
1
2
3
amount of inherited Far1 [a.u.]
G
median arrest duration for mother cells [min]
80
60
40
20
0
1st arrest
2nd arrest
H
Normalized inherited Far1 [a.u.]
0.8
0.6
0.4
0.2
0.0
3nM
0nM
I
1. grow cells in 3nM α-factor
α-factor [nM]
3
0
0
120
240
360
480
2. identify mother-daughter pair
3. determine the base level of [Far1] in the mother cell: X (fig1c)
4. determine Y = inherited [Far1] in the daughter cell (measured at Far1 nuclear entry)
5. determine the arrest duration for the daughter cell T
6. plot (Y/X) -1 against T
X
mother cell
Y
daughter cell
T
J
r2 = 0.03, N = 51
Inherited Ste5 conc. [a.u.]
3
2
1
0
0
150
300
450
Arrest duration [min]
K
r2 = 0.0, N = 51
Inherited Ste5 at perimenter [a.u.]
2
1
0
0
150
300
450
Arrest duration [min]