

## createParentalVSReporter.m, relates to Fig.1B

Required input file: combineddata06012014.mat

Cell lines: parental 184A1 and 184A1 with F3aN400 sensor

Treatment Condition: Cells were serum starved for 6 hours, then treated with combination of drugs and ligands for 0, 15, 45, 90, 120 minutes. Parental 184A1 cells were immunostained with FoxO3 antibody. Reporter 184A1 cells with F3aN400 sensor were fixed and imaged.

Cell Profiler (Ver:2.1.1) code for image segmentation and data extraction

- Rawdata/analysisPipe06012014-parental-withBG.cpproj
- Rawdata/analysisPipe06012014-reporter-withBG.cpproj

Plate map:

Drug	AKTi											
	1	2	3	4	5	6	7	8	9	10	11	12
A	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
B	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
C	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
D	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
E	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
F	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
G	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ligand	IGF1						EGF					
	1	2	3	4	5	6	7	8	9	10	11	12
A	100.00	33.33	11.11	3.70	1.23	0.41	100.00	33.33	11.11	3.70	1.23	0.41
B	100.00	33.33	11.11	3.70	1.23	0.41	100.00	33.33	11.11	3.70	1.23	0.41
C	100.00	33.33	11.11	3.70	1.23	0.41	100.00	33.33	11.11	3.70	1.23	0.41
D	100.00	33.33	11.11	3.70	1.23	0.41	100.00	33.33	11.11	3.70	1.23	0.41
E	100.00	33.33	11.11	3.70	1.23	0.41	100.00	33.33	11.11	3.70	1.23	0.41
F	100.00	33.33	11.11	3.70	1.23	0.41	100.00	33.33	11.11	3.70	1.23	0.41
G	100.00	33.33	11.11	3.70	1.23	0.41	100.00	33.33	11.11	3.70	1.23	0.41
H	100.00	33.33	11.11	3.70	1.23	0.41	100.00	33.33	11.11	3.70	1.23	0.41

Each struct timepoint variable contains 8x12 cells following the above platemap

Time0: {8x12 cell};Time15: {8x12 cell};Time45: {8x12 cell};Time90: {8x12 cell};Time120: {8x12 cell}

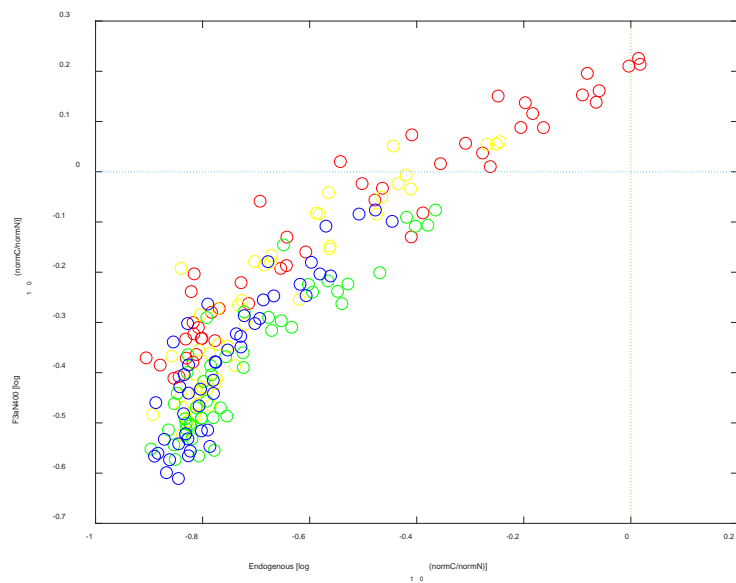
Each cell contains the following data fields:

'nuc\_area' 'nuc\_coordX' 'nuc\_coordY' 'nuc\_formfactor' 'nuc\_integratedDAPI'  
'nuc\_integratedFoxO3' 'nuc\_integratedWCDGreen' 'nuc\_meanDAPI' 'nuc\_meanFoxO3'  
'nuc\_meanWCDGreen' 'nuc\_normmeanFoxO3' 'log10CoverN\_extended\_norm'  
'log10CoverN\_extended' 'log10CoverN\_4pixel\_norm' 'log10CoverN\_4pixel'  
'extendedcyto\_area' 'extendedcyto\_integratedDAPI' 'extendedcyto\_integratedFoxO3'  
'extendedcyto\_integratedECDGreen' 'extendedcyto\_meanDAPI' 'extendedcyto\_meanFoxO3'  
'extendedcyto\_meanWCDGreen' 'smallcyto\_area' 'smallcyto\_integratedDAPI'  
'smallcyto\_integratedFoxO3' 'smallcyto\_integratedWCDGreen' 'smallcyto\_meanDAPI'  
'smallcyto\_meanFoxO3' 'smallcyto\_meanWCDGreen'

## Output figures

Fig.1B

Show Median alone for all conditions at different time points



Show Median with IQR as error bars

