

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, 135 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

Contains: 2 struct variables: parental and reporter

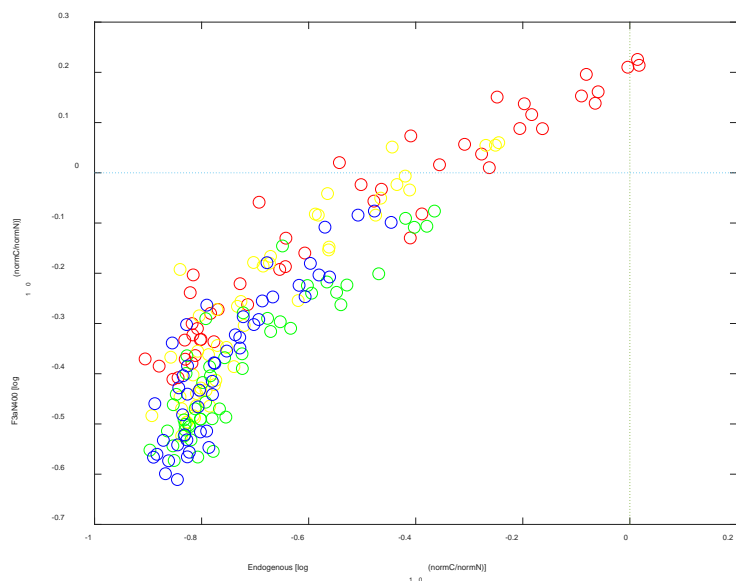
reporter = struct with fields: Time0: {8×12 cell} Time15: {8×12 cell} Time45: {8×12 cell} Time90: {8×12 cell} Time120: {8×12 cell}	parental = struct with fields: Time0: {8×12 cell} Time15: {8×12 cell} Time45: {8×12 cell} Time90: {8×12 cell} Time120: {8×12 cell}
Dimensions of each field follow the platemap above.	
Common data fields	
'nuc_area' 'nuc_coordX' 'nuc_coordY' 'nuc_formfactor' 'nuc_integratedDAPI' 'nuc_integratedFoxO3'	'extendedcyto_area' 'extendedcyto_integratedDAPI' 'extendedcyto_integratedFoxO3' 'extendedcyto_integratedECDGreen' 'extendedcyto_meanDAPI' 'extendedcyto_meanFoxO3'

'nuc_integratedWCDGreen'	'extendedcyto_meanWCDGreen'
'nuc_meanDAPI'	'smallcyto_area'
'nuc_meanFoxO3'	'smallcyto_integratedDAPI'
'nuc_meanWCDGreen'	'smallcyto_integratedFoxO3'
'nuc_normmeanFoxO3'	'smallcyto_integratedWCDGreen'
'log10CoverN_extended_norm'	'smallcyto_meanDAPI'
'log10CoverN_extended'	'smallcyto_meanFoxO3'
'log10CoverN_4pixel_norm'	'smallcyto_meanWCDGreen'
'log10CoverN_4pixel'	

Output figures

Fig.1B

Show Median alone for all conditions at different time points



Show Median with IQR as error bars

