Supplemental Table 1. IC_{50} and α coefficient values from response surface models. [

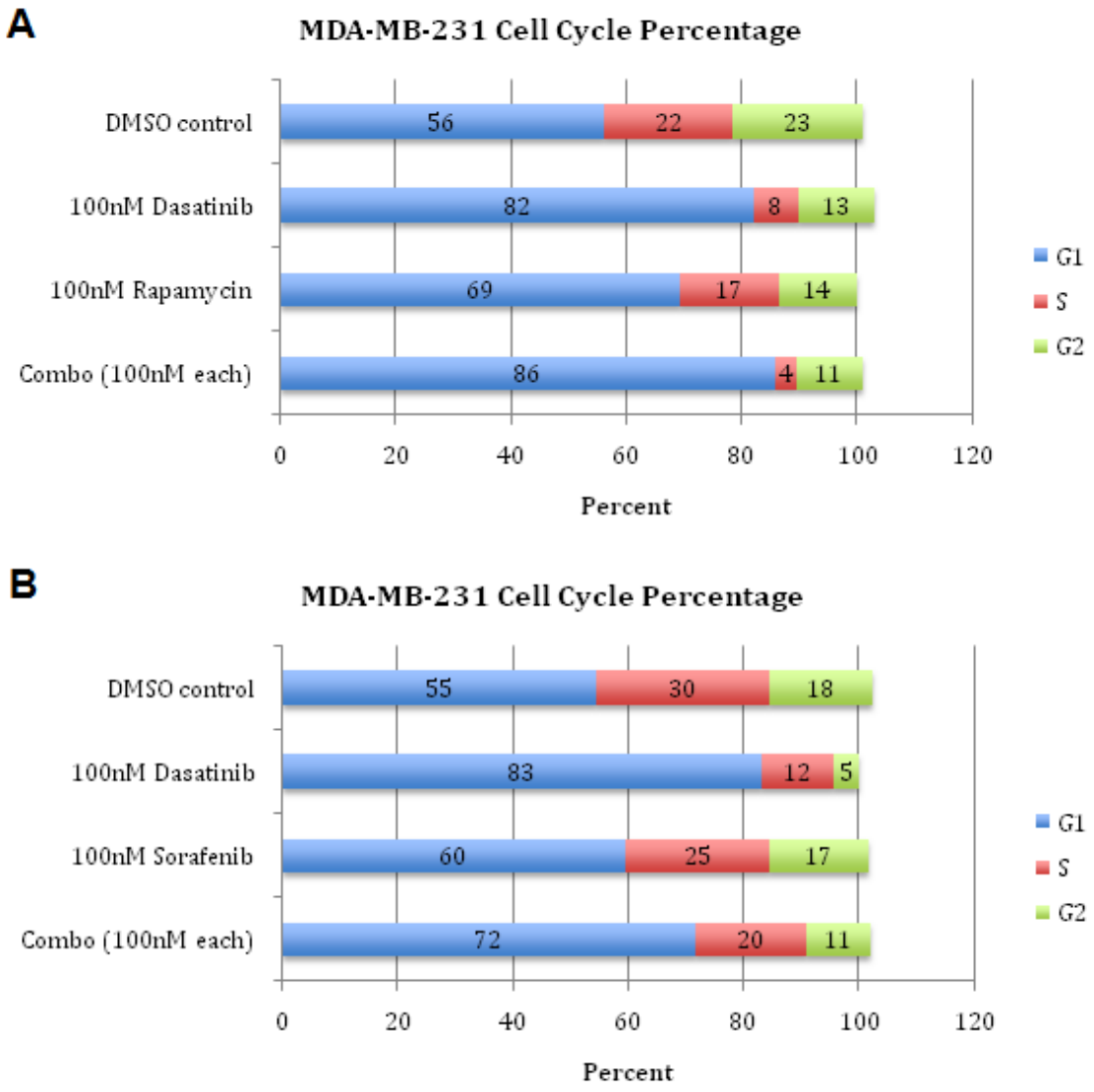
MDA-MB-231		
das+ixa	das (nM)	1.96E+02
	ixa (nM)	6.665
	α	40.87
das+ LY294002	das (nM)	220.6
	pi3k (nM)	6.05E+06
	α	6824
das+pac	das (nM)	7.11E+01
	pac (nM)	4.306
	α	19.74
das+rap	das (nM)	1.21E+02
	rap (nM)	2.51E+06
	α	2.34E+05
das+sor	das (nM)	153.2
	sor (nM)	4.90E+05
	α	7530
das+tam	das (nM)	284.7
	tam (nM)	3.58E+06
	α	2129
das+ U0126	das (nM)	204.4
	mek (nM)	1.27E+06
	α	4055

MCF-7		
das+ixa	das (nM)	1.38E+04
	ixa (nM)	3145
	α	299.8
das+ LY294002	das (nM)	5966
	pi3k (nM)	1.84E+04
	α	8.819
das+pac	das (nM)	2.83E+04
	pac (nM)	70.53
	α	967.5
das+rap	das (nM)	6.30E+04
	rap (nM)	445.5
	α	152.1
das+sor	das (nM)	687.1
	sor (nM)	7096
	α	1.762
das+tam	das (nM)	1375
	tam (nM)	5496
	α	3.161
das+ U0126	das (nM)	1166
	mek (nM)	8817
	α	0.488

Supplemental Text 1. Matlab code for surface response plots

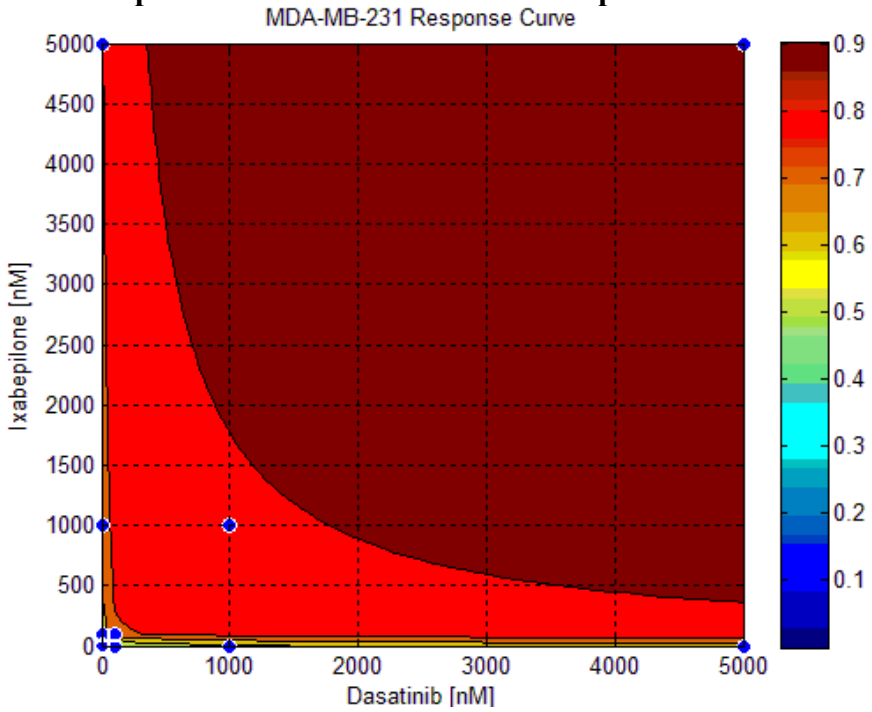
```
clear all
close all
clc

das =  [0 10 100 1000 5000 0 0 0 0 0 0 10 100 1000 5000];
drug2 = [0 0 0 0 0 0 10 100 1000 5000 0 10 100 1000 5000];

fa = [0
0.270214236
0.465100207
0.595024188
0.701451279
0
0.520387008
0.682791983
0.732550104
0.779543884
0
0.577055978
0.780926054
0.823082239
0.869384934];

das=das';
drug2=drug2';

% http://www.mathworks.de/access/helpdesk/help/toolbox/curvefit/brvixm6-1.html#br72xv2-1
ft = fittype( 'Emax*( CA/IC50A + CB/IC50B + alpha*( CA/IC50A ) * ( CB/IC50B ) )^n /((
CA/IC50A + CB/IC50B + alpha*( CA/IC50A ) * ( CB/IC50B ) )^n + 1 )', ...
  'indep', {'CA', 'CB'}, 'depend', 'z', 'problem', 'Emax' )
coeffnames(ft) % {'IC50A','IC50B','alpha','n'}
Emax = 1;
opts = fitoptions(ft);
opts.Upper = [Inf Inf Inf 1];
opts.Lower = [0 0 0 0];
opts.Robust = 'LAR';
opts.StartPoint = [200 3 5 0.5];
f1=fit([das,drug2],fa, ft, opts, 'problem', Emax)

plot(f1,[das,drug2],fa)
xlabel('Dasatinib [nM]');
ylabel('Ixabepilone [nM]');
zlabel('Effect');
title('MDA-MB-231 Response Surface Model');

figure;
plot(f1,[das,drug2],fa,'Style', 'Contour' );
xlabel('Dasatinib [nM]');
ylabel('Ixabepilone [nM]');
title('MDA-MB-231 Response Contour');
colorbar;
das_conc=1000;
drug2_conc=200;
axis([0 das_conc 0 drug2_conc])
```

Supplemental Figure 1. Cell cycle analysis in MDA-MB-231 cells following 48 hr treatment with single agent and dasatinib-based combination.

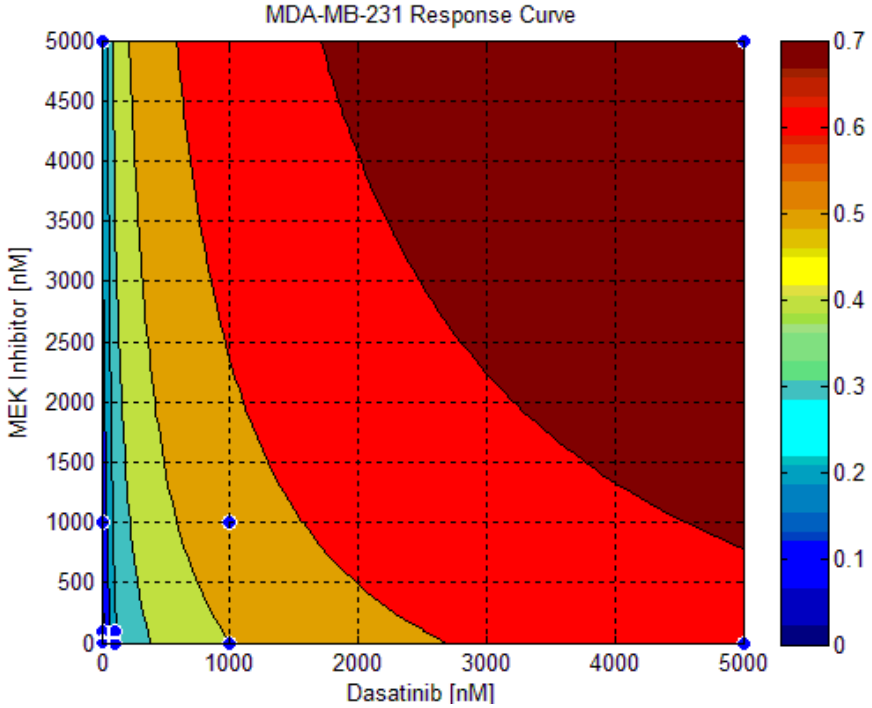


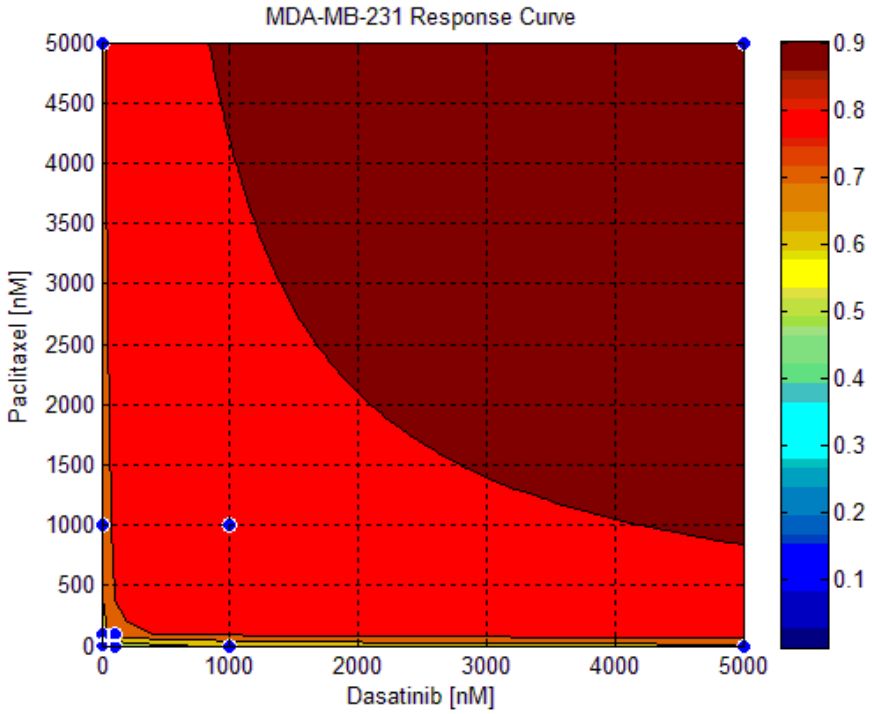
Supplemental Figure 2. Two dimensional plots were created for drug combinations using MatLab software.

A. Dose-Response Plots of dasatinib and ixabepilone in MDA-MB-231 Cells

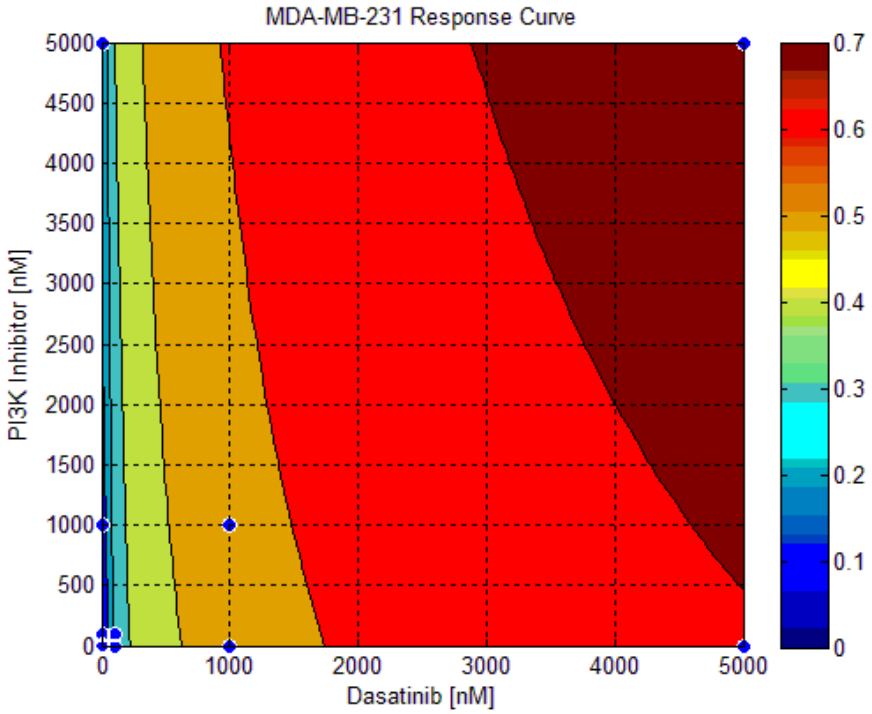


B. Dose-Response of dasatinib and MEK inhibitor **in MDA-MB-231 cells**

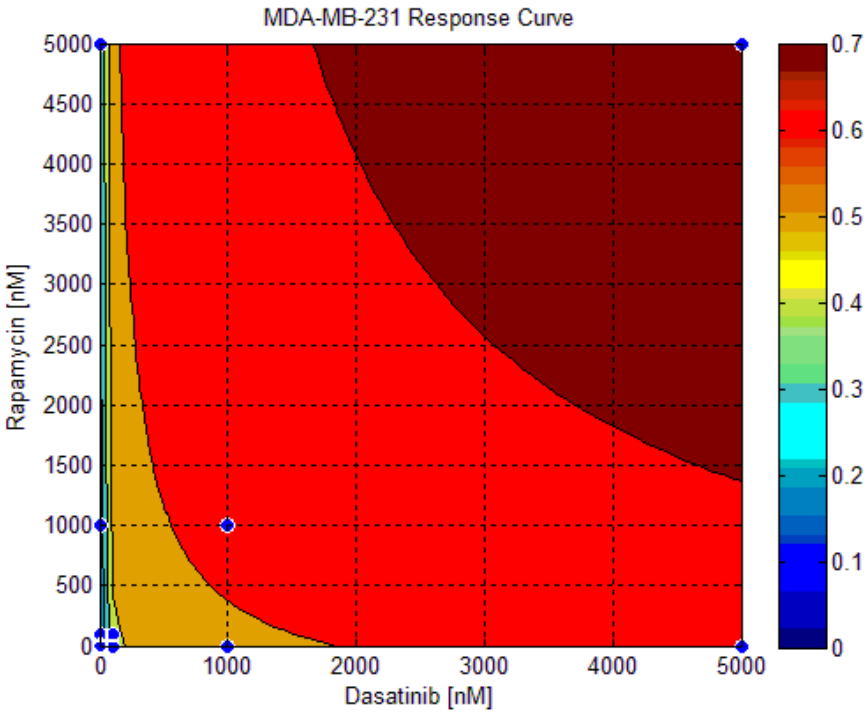




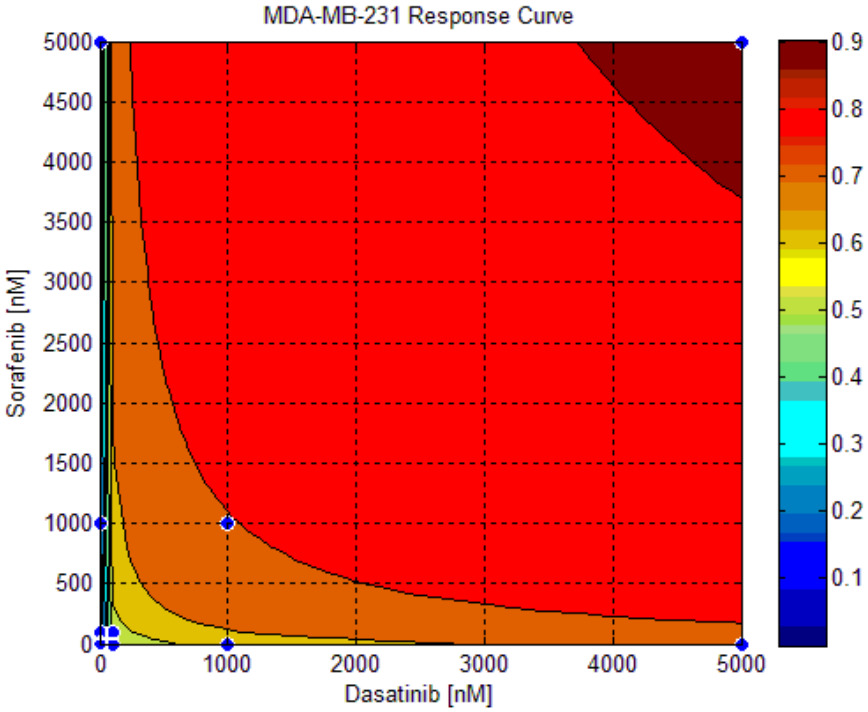
C. Dose Response of dasatinib and paclitaxel in MDA-MB-231 cells



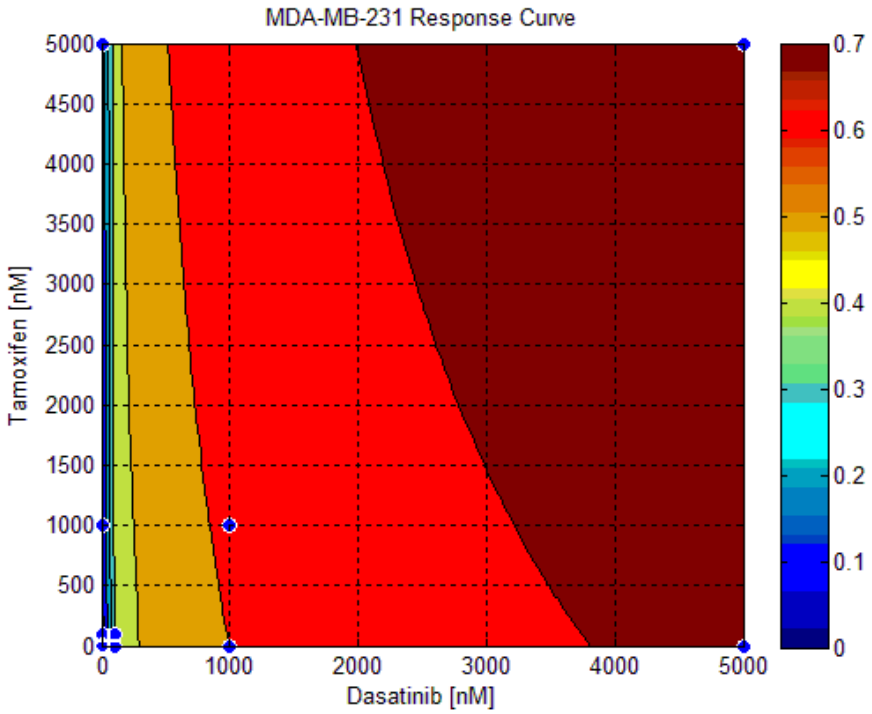
D. Dose Response of dasatinib and PI 3-Kinase inhibitor in MDA-MB-231 cells



E. Dose Response of dasatinib and rapamycin in MDA-MB-231 cells



F. Dose Response of dasatinib and sorafenib in MDA-MB-231 cells



G. Dose Response of dasatinib and tamoxifen in MDA-MB-231 cells

H. Dose-Response Plots of dasatinib and ixabepilone in SK-BR-3 Cells

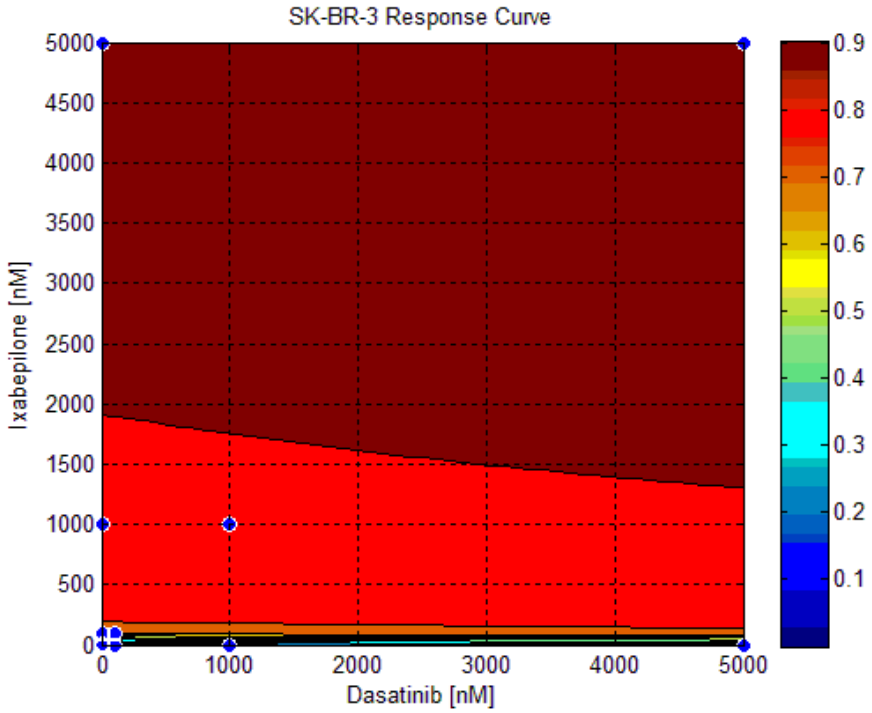
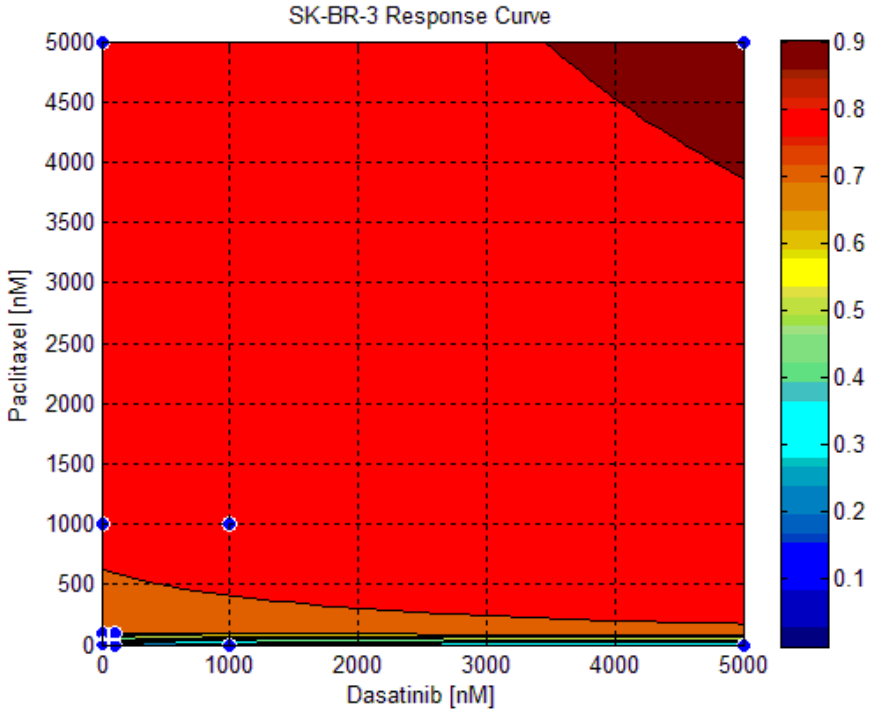


Figure I. Dose Response of dasatinib and paclitaxel in SK-BR-3 cells



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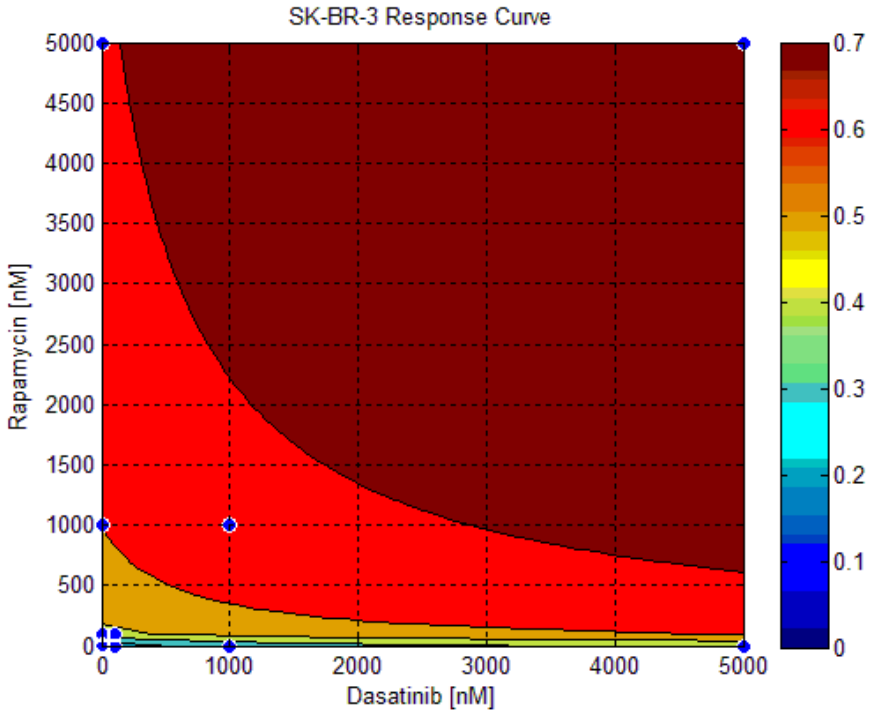
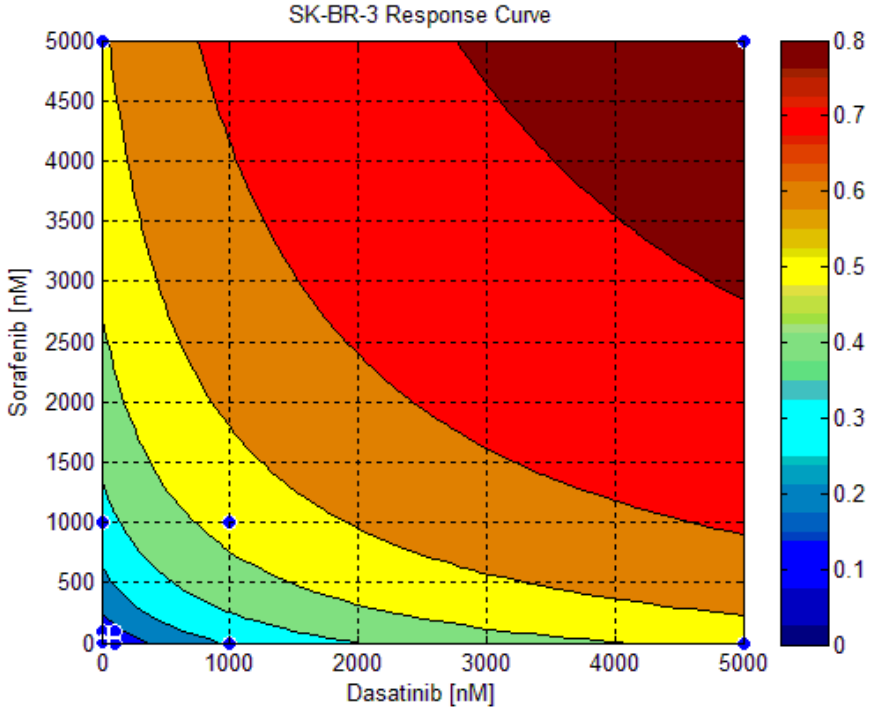
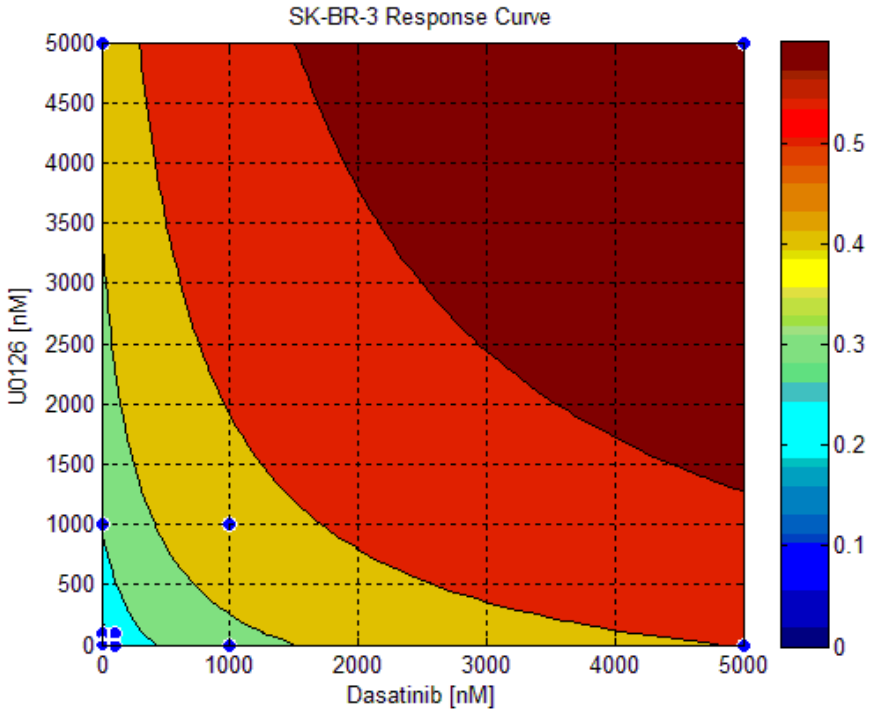
J. Dose Response of dasatinib and rapamycin in SK-BR-3 cells



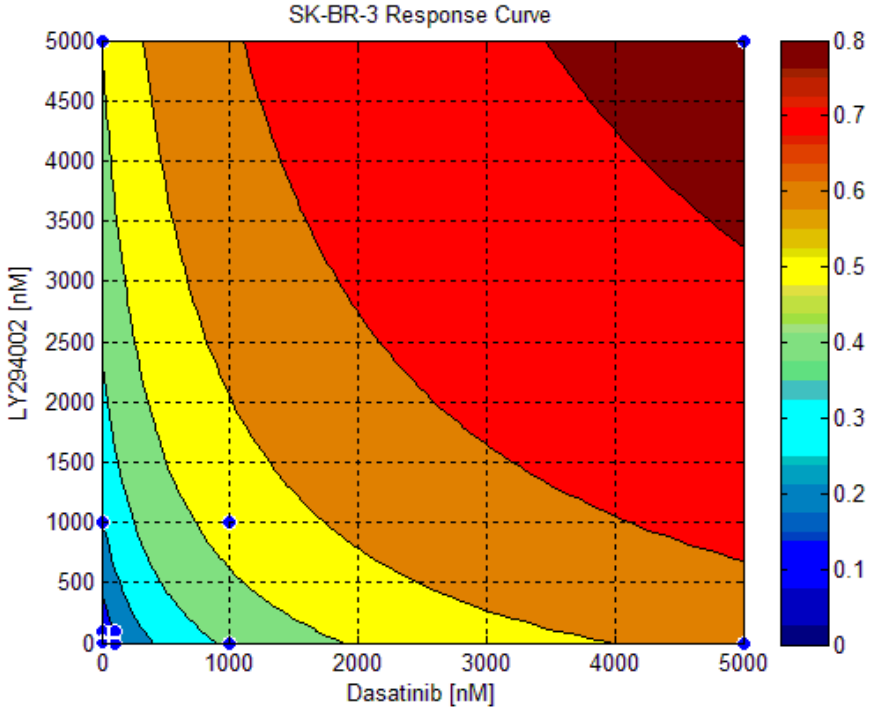
K. Dose Response of dasatinib and sorafenib in SK-BR-3 cells



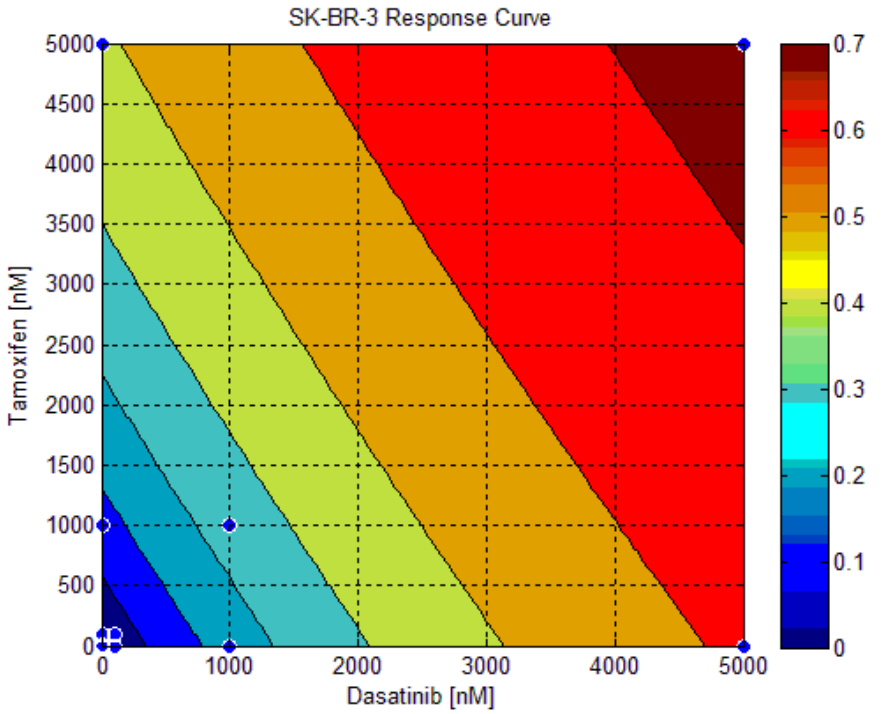
L. Dose Response of dasatinib and U0126 in SK-BR-3 cells



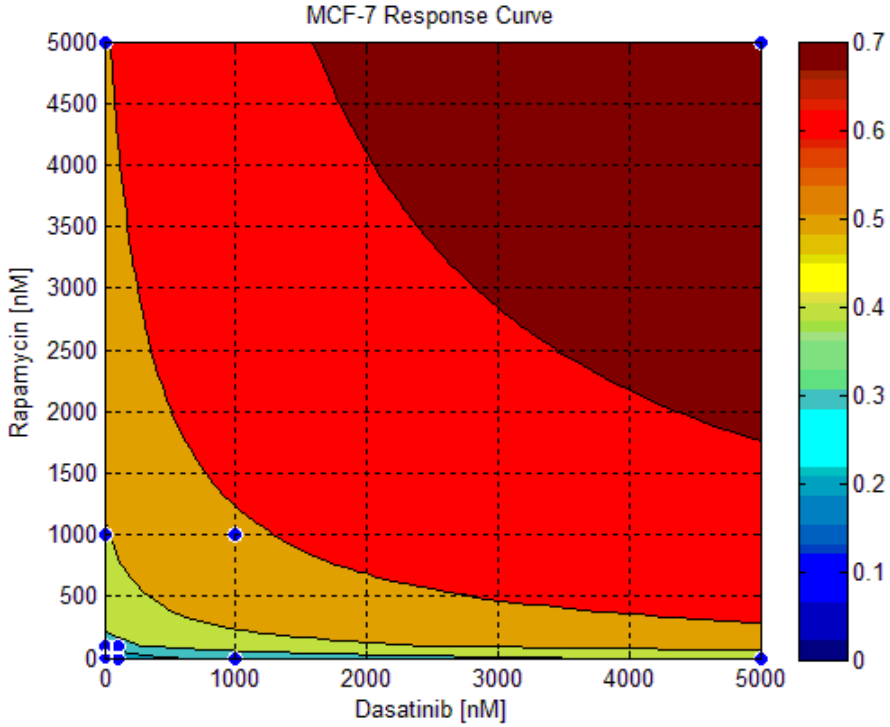
M. Dose Response of dasatinib and PI 3-kinase inhibitor in SK-BR-3 cells



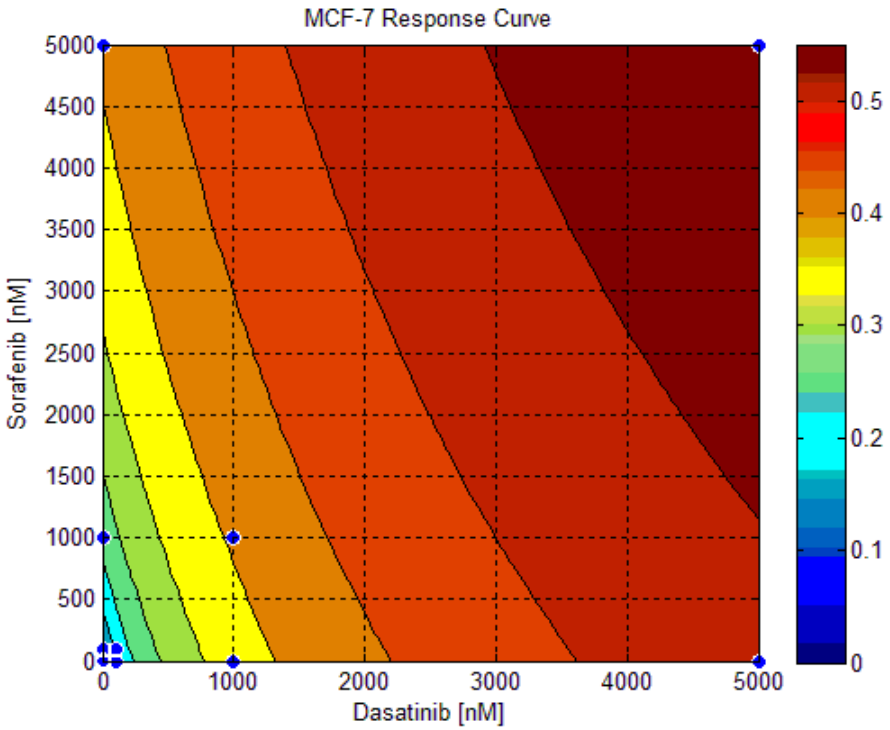
N. Dose Response of dasatinib and tamoxifen in SK-BR-3 cells



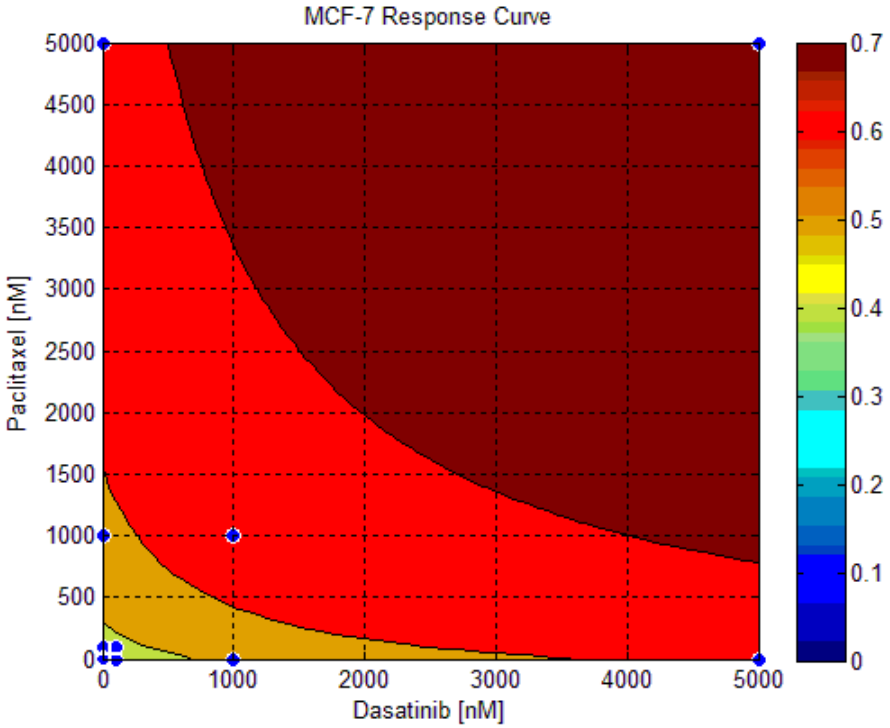
O. Dose Response of dasatinib and rapamycin in MCF-7 cells.



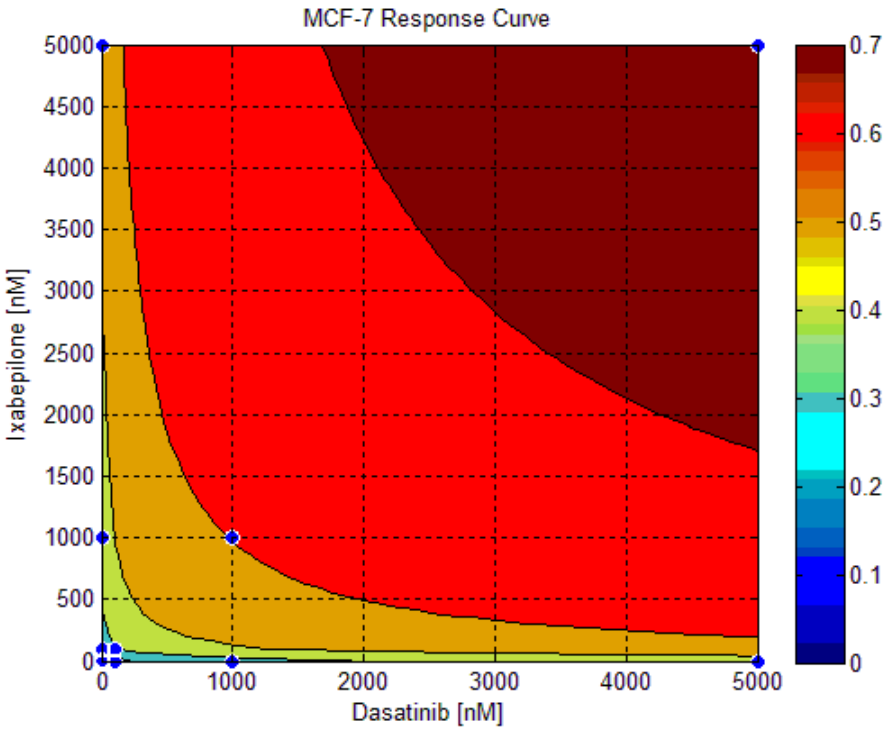
P. Dose Response of dasatinib and sorafenib in MCF-7 cells.



Q. Dose Response of dasatinib and paclitaxel in MCF-7 cells.



R. Dose Response of dasatinib and ixabepilone in MCF-7 cells.


MCF-7 Response Curve
Ixabepilone [nM]
Dasatinib [nM]
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
0
1000
2000
3000
4000
5000
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0