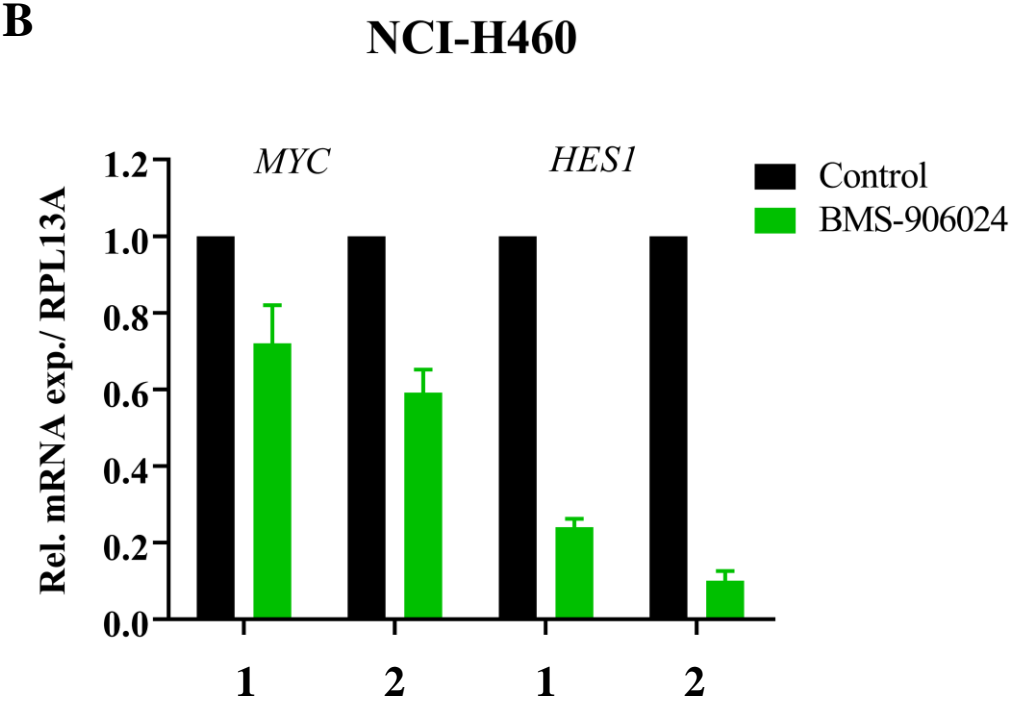
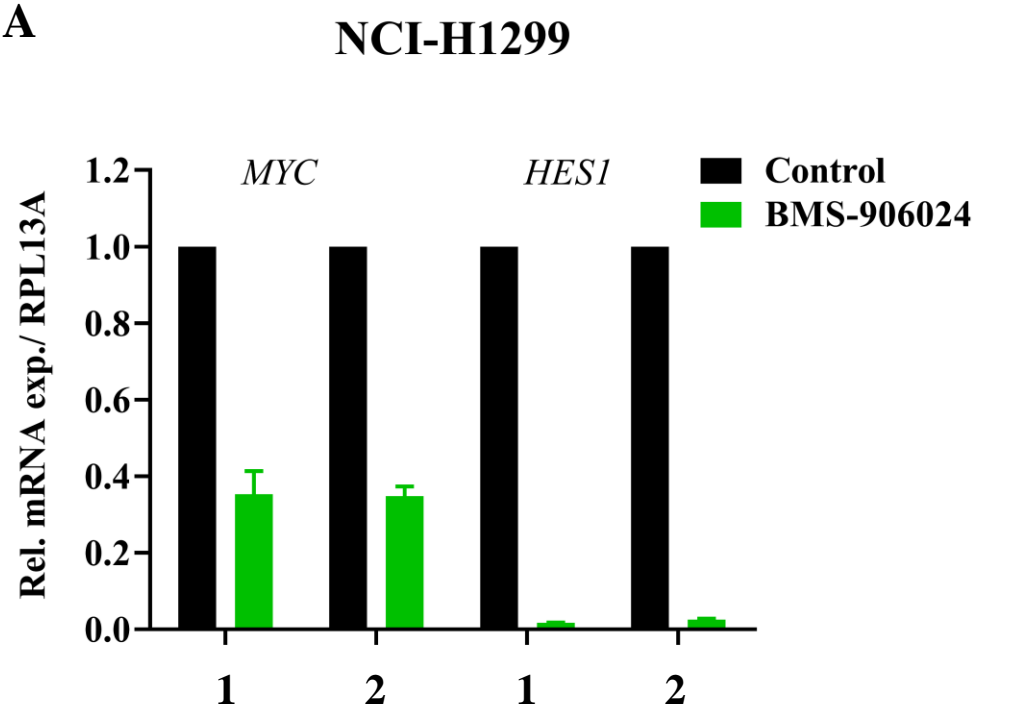
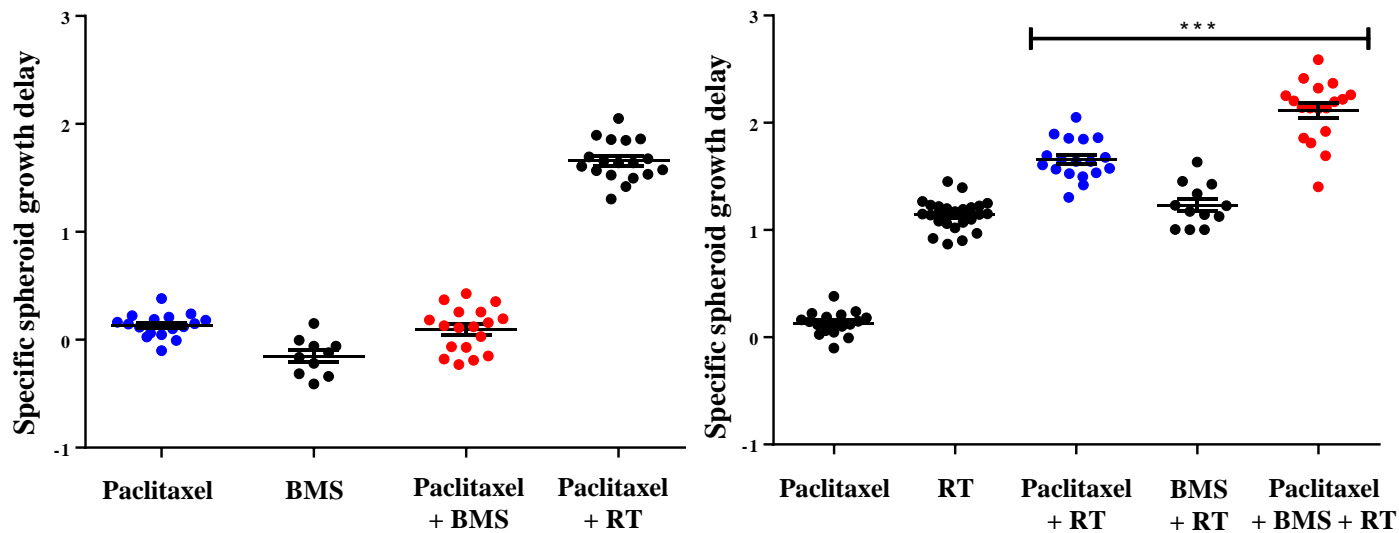


Supplementary Figure 1

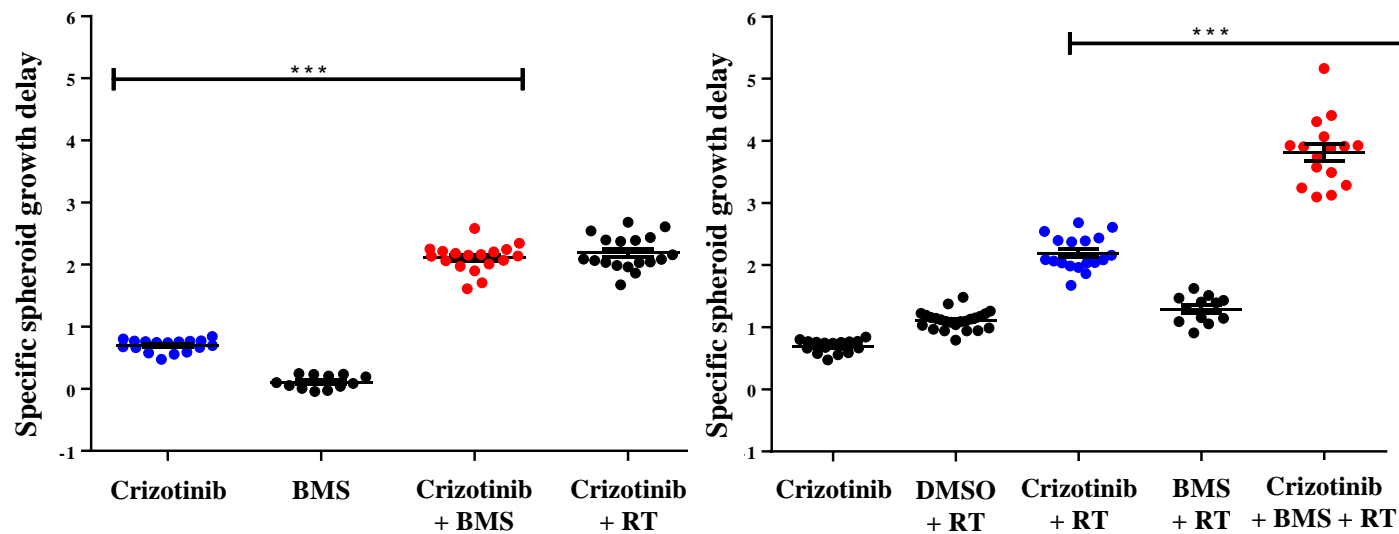


Supplementary Figure 2

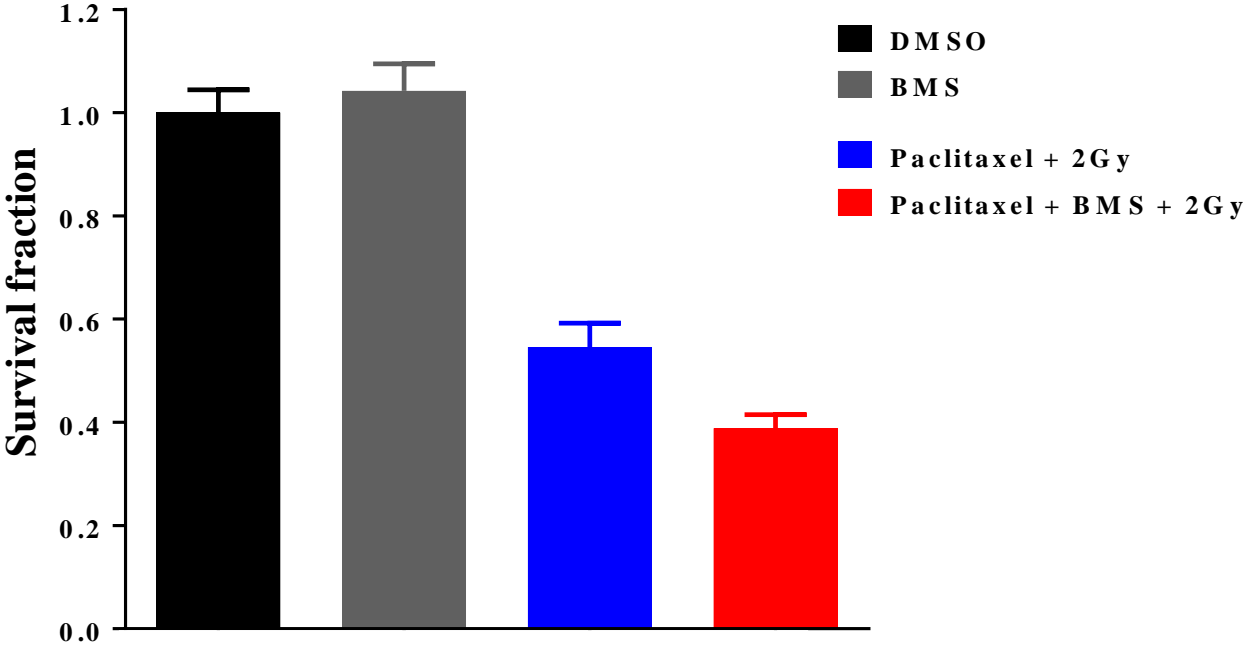
A



B

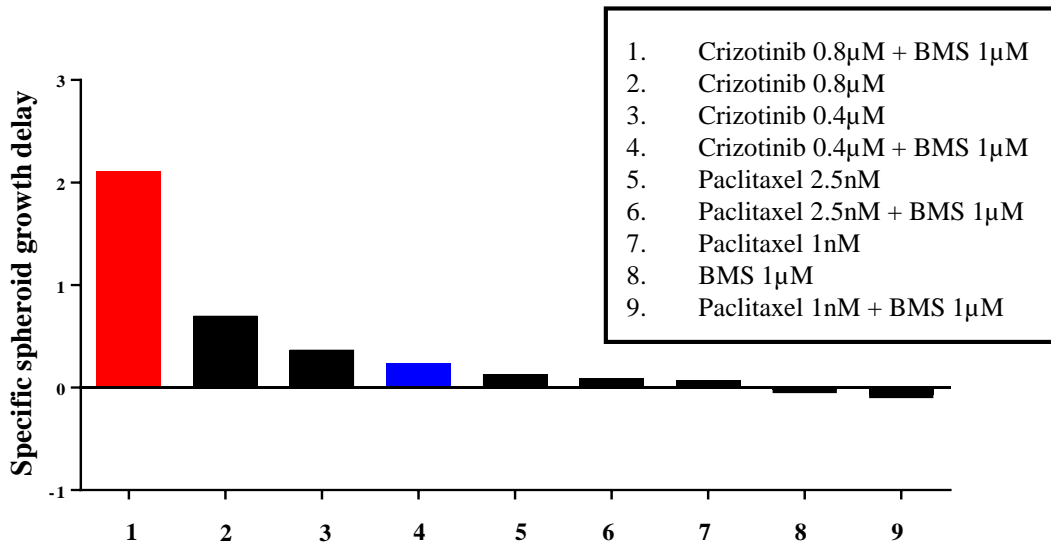


Supplementary Figure 3

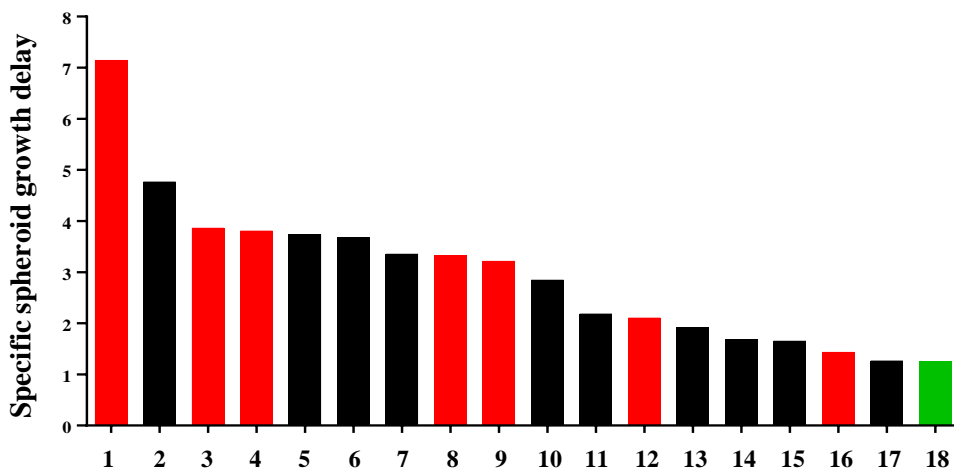


Supplementary Figure 4

A



B



- | | |
|---|--|
| 1. Crizotinib 0.8 μ M + BMS 1 μ M + 4Gy | 10. Paclitaxel 1nM + 4Gy |
| 2. Crizotinib 0.4 μ M + BMS 1 μ M + 4Gy | 11. Crizotinib 0.8 μ M + 2Gy |
| 3. Paclitaxel 2.5nM + BMS 1 μ M + 4Gy | 12. Paclitaxel 2.5nM + BMS 1 μ M + 2Gy |
| 4. Crizotinib 0.8 μ M + BMS 1 μ M + 2Gy | 13. Crizotinib 0.4 μ M + BMS 1 μ M + 2Gy |
| 5. Crizotinib 0.8 μ M + 4Gy | 14. Crizotinib 0.4 μ M + 2Gy |
| 6. Crizotinib 0.4 μ M + 4Gy | 15. Paclitaxel 2.5nM + 2Gy |
| 7. Paclitaxel 2.5nM + 4Gy | 16. Paclitaxel 1nM + BMS 1 μ M + 2Gy |
| 8. Paclitaxel 1nM + BMS 1 μ M + 4Gy | 17. Paclitaxel 1nM + 2Gy |
| 9. BMS 1 μ M + 4Gy | 18. BMS 1 μ M + 2Gy |

Supplementary Table 1.1

DRUG NAME	Synergistic	Protective	Additive	Toxic	No effects
Hydroxyurea					X
Allopurinol					X
Fluorouracil (5-FU)					X
Thioguanine					X
Mercaptopurine					X
Mechlorethamine HCl					X
Thiotepa	X				
Aminolevulinic Acid	X				
Dacarbazine	X				
Arsenic Trioxide	X				
Temozolomide					X
Busulfan					X
Altretamine	X				
Floxuridine				X	
Methoxsalen					X
Lomustine; CCNU					X
Azacitidine	X				
Decitabine			X		
Carmustine	X				
Cyclophosphamide					X
Uracil mustard			X		
Cytarabine; Ara-C				X	
Thalidomide					X
Procarbazine HCl		X			
Streptozocin	X				
Cladribine	X				
Ifosfamide					X
Cisplatin					X
Tretinoin					X
Dexrazoxane HCl			X		
Pentostatin		X			
Gemcitabine HCl					X
Nelarabine			X		
Vorinostat			X		
Exemestane			X		
Anastrozole					X
Letrozole	X				
Lenalidomide	X				
Chlorambucil		X			
Mitomycin C					X
Mitotane; o,p'-DDD			X		
Clofarabine				X	
Pipobroman			X		
Megestrol acetate	X				
Bendamustine HCl					X
Carboplatin			X		
Oxaliplatin		X			
Fludarabine Phosphate					X
Bortezomib				X	
Capecitabine	X				

Supplementary Table 1.2

DRUG NAME	Synergistic	Protective	Additive	Toxic	No effects
Celecoxib			x		
Sunitinib Malate			x		
Axitinib	x				
Mitoxantrone HCl				x	
Pemetrexed Disodium	x				
Gefitinib				x	
Vismodegib	x				
Crizotinib	x				
Methotrexate				x	
Quinacrine			x		
Topotecan HCl				x	
Dasatinib			x		
Pazopanib HCl					x
Imatinib Mesylate				x	
Sorafenib	x				
Raloxifene HCl			x		
Pralatrexate				x	
Vandetanib				x	
Vemurafenib				x	
Ixabepilone				x	
Romidepsin					x
Daunorubicin HCl					x
Doxorubicin HCl	x				
Etoposide	x				
Tamoxifen Citrate			x		
Lapatinib Ditosylate			x		
Irinotecan HCl			x		
Fulvestrant					x
Teniposide				x	
Valrubicin		x			
Docetaxel	x				
Cabazitaxel					x
Paclitaxel				x	
Vinblastine Sulfate				x	
Vincristine Sulfate					x
Sirolimus (Rapamycin)		x			
Everolimus				x	
Dactinomycin				x	
Plicamycin				x	
Bleomycin				x	
Vinorelbine Tartrate				x	
Carfilzomib				x	
Imiquimod				x	
Triethylenemelamine				x	
Erlotinib HCl				x	
Amifostine					x
Zoledronic Acid				x	
Abiraterone				x	
Melphalan				x	
Nilotinib				x	
Estramustine phosphate		x			

Supplementary Table 2.1

DRUG NAME	Synergistic	Protective	Additive	Toxic	No effects
Hydroxyurea					X
Allopurinol		X			
Fluorouracil (5-FU)		X			
Thioguanine					X
Mercaptopurine					X
Mechlorethamine HCl					X
Thiotepa	X				X
Aminolevulinic Acid					X
Dacarbazine					X
Arsenic Trioxide		X			
Temozolomide		X			
Busulfan					X
Altretamine					X
Floxuridine					X
Methoxsalen					X
Lomustine; CCNU					X
Azacitidine		X			
Decitabine		X			
Carmustine					X
Cyclophosphamide					X
Uracil mustard					X
Cytarabine; Ara-C				X	
Thalidomide					X
Procarbazine HCl					X
Streptozocin		X			
Cladribine					X
Ifosfamide		X			
Tretinoin		X			
Dexrazoxane HCl					X
Pentostatin					X
Gemcitabine HCl				X	
Nelarabine		X			
Vorinostat					X
Exemestane		X			
Anastrozole		X			
Letrozole					X
Lenalidomide					X
Chlorambucil					X
Mitomycin C				X	
Mitotane; o,p'-DDD			X		
Clofarabine	X				
Pipobroman					X
Megestrol acetate					X
Bendamustine HCl					X
Carboplatin					X
Oxaliplatin					X
Fludarabine Phosphate			X		X
Bortezomib				X	
Capecitabine					X

Supplementary Table 2.2

DRUG NAME	Synergistic	Protective	Additive	Toxic	No effects
Celecoxib					X
Sunitinib Malate					X
Axitinib					X
Mitoxantrone HCl					X
Pemetrexed Disodium			X		X
Gefitinib					X
Vismodegib					X
Crizotinib	X				
Methotrexate					X
Quinacrine					X
Topotecan HCl					X
Dasatinib			X		
Pazopanib HCl					X
Imatinib Mesylate					X
Sorafenib					X
Raloxifene HCl					X
Pralatrexate					X
Vandetanib					X
Vemurafenib					X
Ixabepilone					X
Romidepsin				X	X
Daunorubicin HCl				X	
Doxorubicin HCl			X		
Etoposide	X				
Tamoxifen Citrate					X
Lapatinib Ditosylate					X
Irinotecan HCl	X				
Fulvestrant		X			
Teniposide				X	
Valrubicin			X		X
Docetaxel			X	X	
Cabazitaxel					X
Paclitaxel				X	X
Vinblastine Sulfate				X	X
Vincristine Sulfate				X	
Sirolimus (Rapamycin)			X		
Everolimus			X		
Dactinomycin				X	
Plicamycin				X	
Bleomycin			X		
Vinorelbine Tartrate				X	
Carfilzomib				X	
Imiquimod					X
Triethylenemelamine			X		
Erlotinib HCl					X
Amifostine					X
Zoledronic Acid					X
Abiraterone					X
Melphalan					X
Nilotinib					X
Estramustine phosphate					X

Supplementary Table 3

H1299	Chemo Conc.	RT dose (Gy)	Specific spheroid growth delay difference			Synergism		
			Chemo vs Chemo + BMS	ChemoRT vs ChemoRT + BMS	BMS + RT vs ChemoRT + BMS	BMS vs Chemo	BMS vs ChemoRT	BMS vs RT
Cisplatin x	1.25 μM	2	***	*	***	ns	**	ns
		4	**	***	***	ns	ns	ns
	2.5 μM	2	ns	***	***	**	ns	ns
		4	ns	ns	***	**	ns	ns
Etoposide	0.1 μM	2	***	**	*	ns	ns	ns
		4	***	ns	**	ns	ns (0.0704)	ns
	0.25 μM	2	ns	***	***	*	ns	ns
		4	ns	ns	***	*	ns (0.0535)	ns
Paclitaxel	1 nM	2	ns	ns	ns	ns	ns	ns
		4	ns	***	ns	ns	***	ns
	2.5 nM	2	ns	***	***	ns	***	ns
		4	ns	***	**	ns	***	ns
Docetaxel	1 nM	2	*** (BMS effect)	***	**	*	*	ns
		4	*** (BMS effect)	***	ns	*	ns	ns
Pemetrexed x	0.25 μM	2	ns	ns	ns	ns	ns	ns
		4	ns	ns	ns	ns	ns	***
	0.5 μM	2	ns	ns	ns	ns	ns	ns
		4	ns	ns	ns	ns	ns	***
Crizotinib	0.4 μM	2	**	*	***	ns	ns	ns
	0.8 μM		ns	***	***	***	***	ns

Supplementary Table 4

H460	Chemo Conc.	RT dose (Gy)	Specific spheroid growth delay difference			Synergism		
			Chemo vs Chemo + BMS	ChemoRT vs ChemoRT + BMS	BMS + RT vs ChemoRT + BMS	BMS vs Chemo	BMS vs ChemoRT	BMS vs RT
Paclitaxel	1 nM	2	<i>ns</i>	<i>ns</i>	*	<i>ns</i>	***	***
		4	<i>ns</i>	**	<i>ns</i>	<i>ns</i>	**	***
	2.5 nM	2	<i>ns</i>	***	***	<i>ns</i>	***	***
		4	<i>ns</i>	*	***	<i>ns</i>	*	***
Crizotinib	0.4 μM	2	<i>ns</i>	**	***	***	<i>ns</i>	<i>ns</i>
		4	<i>ns</i>	***	***	***	<i>ns</i>	***
	0.8 μM	2	***	***	***	***	***	<i>ns</i>
		4	***	***	***	***	***	***

Supplementary Table 5

Product	Company	Cat. Number
DMEM High glucose with L-glutamine	Westburg	BE12-604F
RPMI 1640 with L-glutamine	Westburg	BE12-702F
Fetal Bovine serum	Sigma-Aldrich	F7524
Puromycin (solution) 100 mg	InvivoGen, Bio-Connect	ant-pr-1
Crizotinib	Selleckchem	s1068
DMSO	Sigma-Aldrich	41639
CELLSTAR® 96-multiwell plates	Greiner	655180
CELLSTAR® 12-multiwell plates	Greiner	665180
Bradford Protein Assay Dye reagent	Bio-Rad	5000006
Trizma® base	Sigma-Aldrich	T6066-1KG
HCl	Sigma-Aldrich	H1758-500ml
NaCl	Sigma-Aldrich	S3014-1KG
Nonidet P-40	Affymetrix USB	19628
Sodium deoxycholate	Sigma-Aldrich	30970-25G
SDS	Bio-Rad	1610418
Sodium Fluoride	Sigma-Aldrich	S1504-500g
Sodium orthovanedate	Sigma-Aldrich	S6508-10g
Tween® 20	VWR	8221841000
PVDF membrane	VWR	10600023
Anti-Cleaved NOTCH 1 Val1744 (D388) mAb rabbit	Bioke	4147S
Anti-Lamin A (C-terminal) rabbit	Sigma-Aldrich	L1293-200ul
Goat anti-rabbit IgG HRP-linked	Bioke	7074S
Amersham ECL™ prime WB detection reagent	Sigma-Aldrich	gerpn2232
Agarose for MCTS, Low electroendosmosis	Sigma-Aldrich	A9539-100G
96-multiwell Ultra-Low attachment plates	Corning, BioScience	7007