

Supplemental information

Supplemental Figure legends

Supplemental Figure 1. Profiles of aberrations in glioma, melanoma and lung cancer

(A) Chromosomal copy number changes of NSCLC cell lines are plotted against those of primary gliomas. Two separate figures are given for deletions (left panel, NSCLC cell lines in blue, gliomas in purple) and amplifications (right panel, NSCLC cell lines in red, gliomas in purple). **(B)** Chromosomal copy number changes of NSCLC cell lines are plotted against those of primary melanomas (NSCLC cell lines in red respectively blue as above, melanoma short term cultures in purple). **(C)** Genomic similarity was analyzed by computing correlations of GISTIC q-values for each SNP between NSCLC cell lines and the indicated cancer entity primary lung cancer, ovarian cancer, glioma, melanoma cell culture samples, normal tissues and a randomly split subset of NSCLC cell lines.

Supplemental Figure 2. Analysis of the interactions of mutations and copy number lesions

Hierarchical clustering of significant lesions defined by GISTIC and oncogene mutations using the reciprocal co-occurrence ratio as distance measure and average linkage of clusters. The distance of the clusters is reflected in the length of the branches. Note that mutations in *EGFR* and *KRAS* occur in a mutually exclusive fashion, while *EGFR* mutation and amplification are found in the same cluster. Amplifications are depicted in red and deletions in blue. Relevant genes within GISTIC peaks are annotated.

Supplemental Figure 3. Phenotypic properties of primary tumors are conserved in erlotinib-sensitive lung cancer cells.

(A) Hierarchical clustering of primary lung adenocarcinomas was performed using genes identified as being differentially expressed in erlotinib-sensitive versus erlotinib-resistant NSCLC cell lines. Red bars represent *EGFR*-mutant tumors. **(B)** The *EGFR* mutation signature published by Choi et al. was used to perform hierarchical clustering of primary lung adenocarcinomas. Red bars represent *EGFR*-mutant tumors.

Supplemental Figure 4. Characterization of compounds used in the screen

Displayed are the chemical structures, the development phase and the main known targets for all compounds used in the screening experiments. Also, the maximum concentrations used in the high-throughput (10 μ M for 17-AAG, erlotinib, vandetanib, lapatinib, sunitinib,

rapamycin and PD168393, 30 μ M for purvalanol, SU-11274, dasatinib, 60 μ M for VX-680, 90 μ M for UO126) are depicted.

Supplemental Figure 5. Mutated EGFR as a target for vandetanib activity

(A) Left panel: Vandetanib represented as pink ballandsticks is modeled into the ATP binding site of EGFR based on its crystallographically determined binding mode with the RET kinase. Right panel: The T790M mutation at the gatekeeper position of the ATP pocket, associated with secondary EGFR-inhibitor resistance in patients. **(B)** Ba/F3 cells expressing mutant (del Ex19 or Ex19/T790M) EGFR were treated for 12h with the indicated concentrations of either vandetanib or erlotinib and whole-cell lysates were immunoblotted for phospho-EGFR and EGFR. **(C)** Dose-dependent growth inhibition after 96h treatment with either dasatinib or erlotinib was assessed measuring cellular ATP content.

Supplemental Figure 6. Lesion-based prediction for activity of UO126

Distribution of copy number gain at 1q21.3 (black columns) across the UO126-sensitivity profile (GI_{50} values) in the NSCLC cell line collection and the hypothemycin-sensitivity profile in the NCI-60 cell line panel. Incidence of amplification of 1q21.3 and sensitivity towards UO126 and hypothemycin is represented by a contingency table for both datasets.

Supplemental Figure 7. Analysis of activity of 17-AAG

(A) Displayed is the induction of apoptosis after treatment with 17-AAG as measured by FACS analysis, utilizing Annexin-V/PI staining as a surrogate marker for apoptosis. DMSO (0.1%) was used as control. The fraction of cells either positive for Annexin-V or PI are defined as apoptotic. **(B)** Validation of 17-AAG as an inhibitor of chaperonage of mutated EGFR by HSP90. Immunohistochemical detection of total EGFR protein after immunoprecipitation of HSP90 of EGFR mutated PC9 cell lines before and after treatment with 1 μ M of erlotinib is depicted. **(C)** Validation of the antibody for total protein of KRAS using lentiviral shRNA transfection. Immunohistochemical detection of total KRAS protein as well as actin as loading control of parental A549 cells, A549 cell lines transduced with an empty vector (A549^{cont}) and shRNA targeting KRAS (A549^{KRASkd})

Supplemental Figure 8. Inhibition of HSP90 leads to tumor regression in transgenic lox-stop-lox^{KRASG12D} mice

Displayed are the MRI scans of lox-stop-lox^{KRASG12D} before and after treatment with either 17-DMAG or placebo. The areas of lung tumors were manually segmented, measured on each MR slice and total tumor volume reduction was calculated for each mouse treated with 17-DMAG or placebo.

Supplemental Figure 9. TESP prediction model for activity of erlotinib and dasatinib

(A) Cell lines according to their sensitivity to erlotinib ($GI_{50} < 1 \mu\text{M}$; yellow bars) are displayed. Cell lines enriched for sensitivity to erlotinib are found among those with highest copy numbers for *EGFR*. The contingency table for *EGFR* amplification and erlotinib sensitivity including the p-value determined using fisher's exact test are displayed in the right panel. **(B)** Left panel: Distribution of *TESP* gene positive cells (black columns and asterisks) across the dasatinib-sensitivity profile (GI_{50} -values) in the NSCLC cell line collection. Incidence of *TESP* gene positive cells and sensitivity ($GI_{50} < 0.1 = \text{sensitive}$; $GI_{50} > 0.1 = \text{resistant}$) towards dasatinib are represented by a fisher's exact test. Right panel: Distribution of GI_{50} -values for cells with amplification of 2 *TESP* genes (*TESP+* [2 genes]) and cells without amplification in these genes. **(C)** Left panel: In H322M cells levels of phosphorylated-SRC (p-SRC) and the corresponding SRC-protein levels were detected by immunoblotting after treatment with dasatinib. Right panel: Viability of H322M cells was measured after treatment with dasatinib at the indicated concentrations.

Supplemental Figure 10. Validation of EphA3 as a relevant target for dasatinib activity.

(A) H28 cells harboring amplified *EphA3* were either left untreated, transduced with an empty vector control (H28 control) or with shRNA targeting *EphA3* (H28 EphA3). After puromycin selection, levels of EphA3 in H28 cells transduced with the indicated vectors were analyzed by immunoblotting (top). Bottom: Viability was quantified by cell counting. Error bars represent standard deviation between different experiments.

Supplemental Table 1. The NSCLC cell line collection

Overview over the NSCLC cell line collection used in the study including providers and morphopathological details.

Supplemental Table 2. Significant lesions in lung cancer

Summary of regions with significant copy number alterations as defined by GISTIC in the cell line panel and a primary lung cancer panel.

Supplemental Table 3. All significant copy number lesions as defined by GISTIC across all cell lines

All cell lines are annotated for presence ("1") or absence ("0") of a given lesion for different copy number thresholds as defined by GISTIC.

Supplemental Table 4. Analysis of homozygous deletions and LOH

Regions targeted by homozygous deletions (HD) and by loss of heterozygosity (LOH) inferred from SNP array data are displayed in this table.

Supplemental Table 5. Raw sensitivity data for screened compounds and mutational status

Overview over the half maximal inhibitory concentrations (GI_{50} values; [μ M]) derived from high-throughput cell line based screening and analysis of the respective preimage under the kill curve for each cell line and each compound. Additionally, all cell lines are annotated for presence ("1") or absence ("0") of mutations in *EGFR*, *KRAS*, *NRAS*, *BRAF*, *PIK3CA* and *EML4/ALK*.

Supplemental Table 6. Expression signature of *EGFR*-mutated cell lines

The probestes of the Affymetrix U133A platform, the genes, the accession number, the fold change, the difference of means as well as the *p*-values are displayed for the genes identifying an *EGFR*-mutation signature in cell lines.

Supplemental Table 7. Multi-lesion predictors of sensitivity

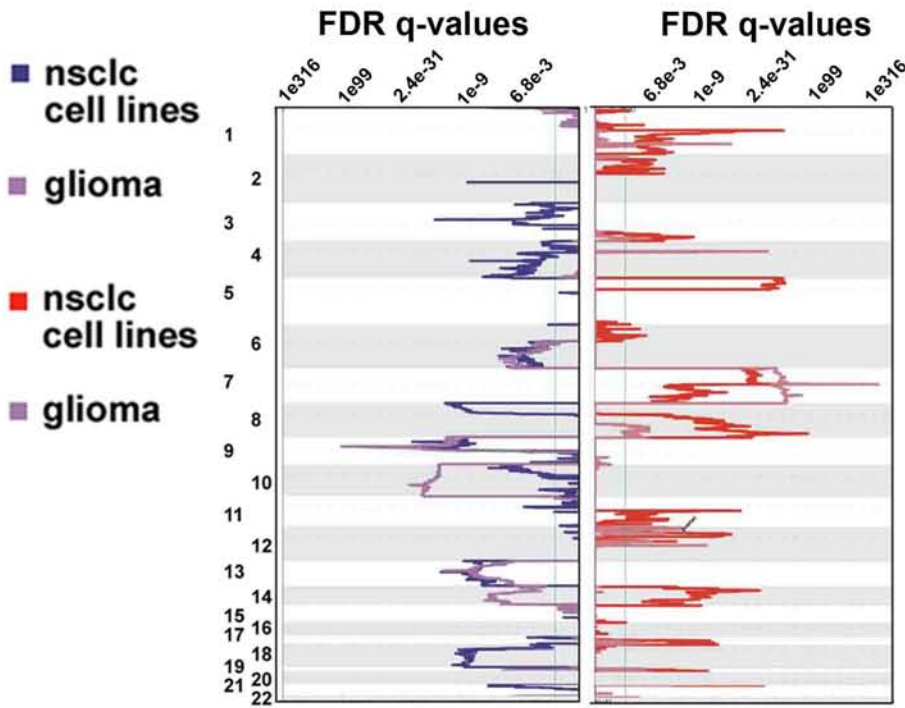
Multi-lesion predictors of sensitivity tested with the KNN method, Fisher's exact test and *t*-test are displayed. Only significant predictors are displayed for two different copy number thresholds for all compounds analyzed in the cell line based screening.

Supplemental Table 8. TESP prediction of activity of dasatinib

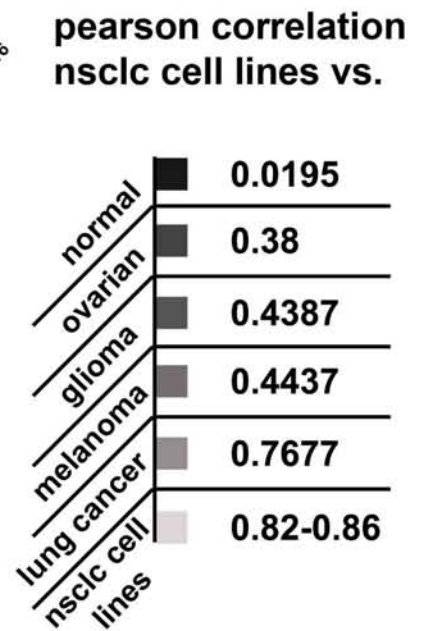
The GI_{50} -values of dasatinib across all cell lines are displayed. All cell lines are annotated for presence ("1") or absence ("0") of copy number > 3 of genes identified as predictors of dasatinib activity (*EPHA3*, *ABL2*, *LCK*, *BLK*, *SRC*, *EPHA5*, *EPHA8*, *YES1*, *FRK*).

Supplemental Figure 1

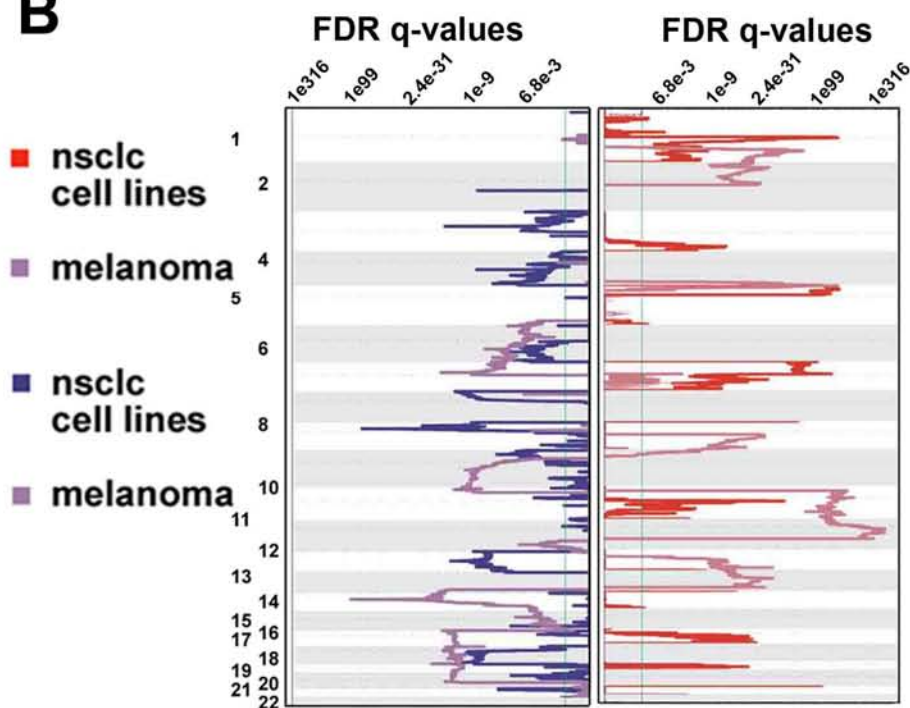
A



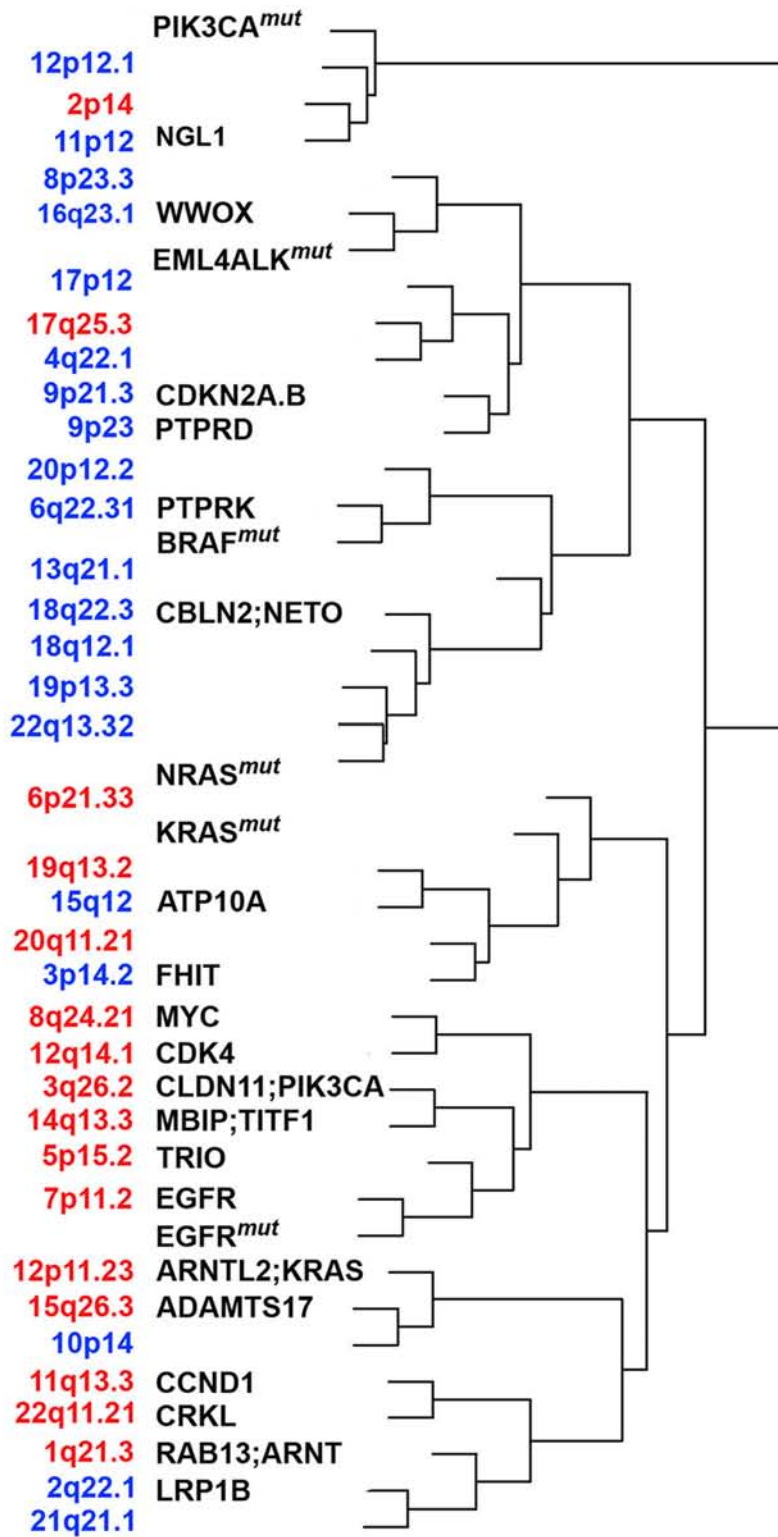
C



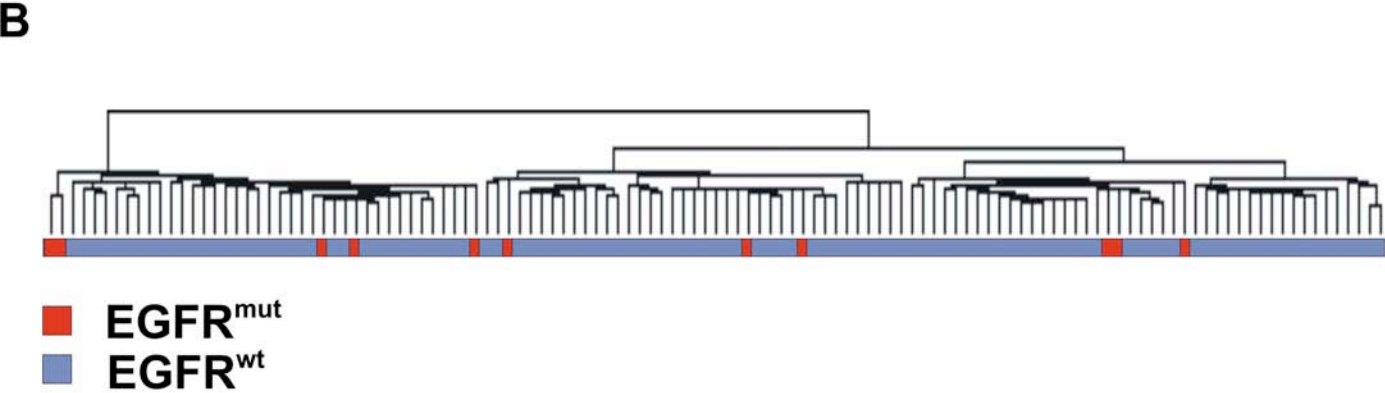
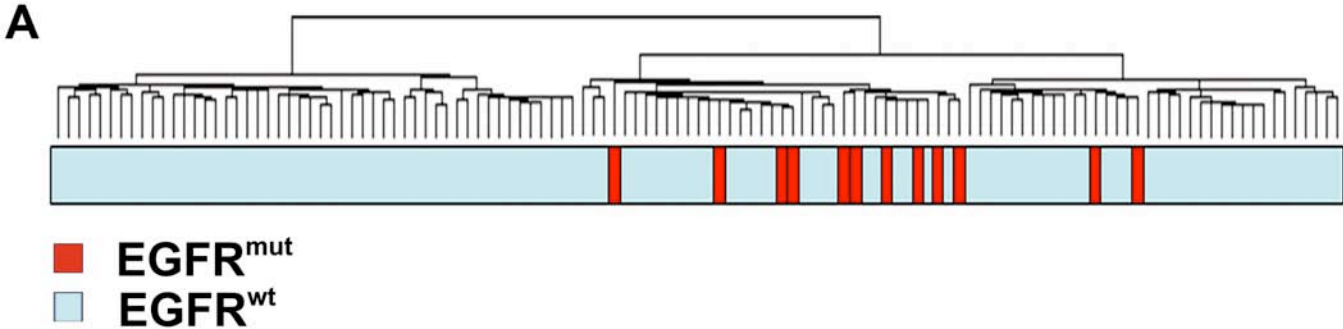
B



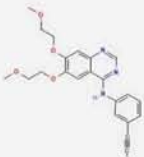

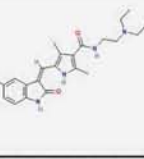
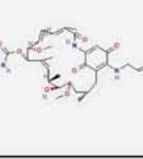
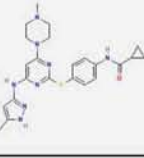
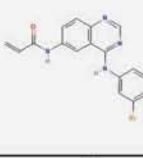


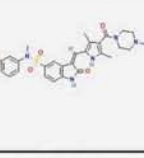
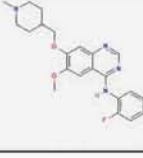
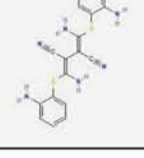
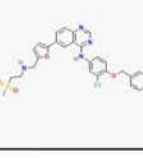
Supplemental Figure 2



Supplemental Figure 3

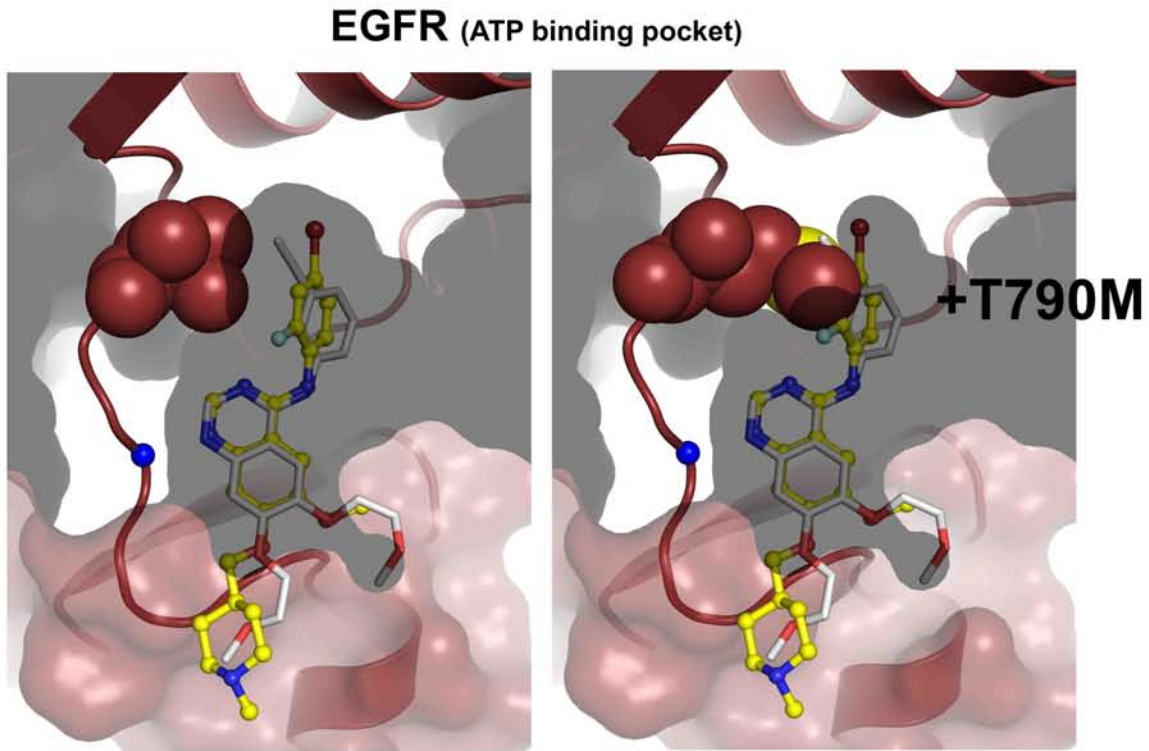


Supplemental Figure 4

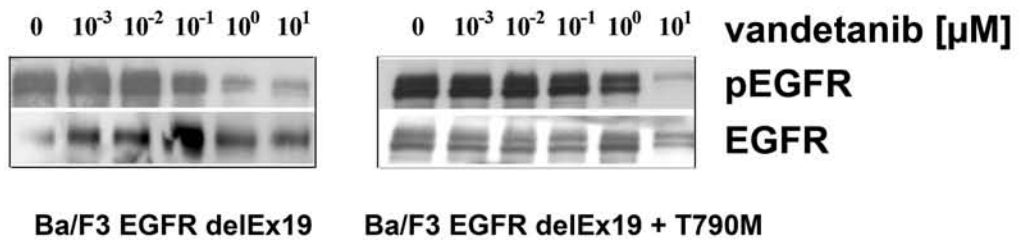
	<p>Erlotinib</p> <p>known targets: EGFR</p>	<p>max-conc.: 10μM</p> <p>development phase: approved (NSCLC)</p>		<p>Purvalanol A</p> <p>known targets: CDK1</p>	<p>max-conc.: 90μM</p> <p>development phase: experimental</p>
	<p>Sunitinib</p> <p>known targets: PDGFR3-a, PDGFR-b, VEGFR, Kit, FLT3, CSF-1R, RET</p>	<p>max-conc.: 10μM</p> <p>development phase: approved (GIST, RCC)</p>		<p>17-AAG</p> <p>known targets: Hsp90</p>	<p>max-conc.: 10μM</p> <p>development phase: phaseII (solid tumors, lymphoma)</p>
	<p>VX-680</p> <p>known targets: Aurora kinase</p>	<p>max-conc.: 60μM</p> <p>development phase: phaseI (solid tumors)</p>		<p>PD-168393</p> <p>known targets: EGFR</p>	<p>max-conc.: 10μM</p> <p>development phase: experimental</p>
	<p>Rapamycin</p> <p>known targets: mTOR</p>	<p>max-conc.: 10μM</p> <p>development phase: phaseII (solid tumors)</p>		<p>Dasatinib</p> <p>known targets: Src, Bcr/Abl</p>	<p>max-conc.: 30μM</p> <p>development phase: approved (CML)</p>
	<p>SU-11274</p> <p>known targets: c-Met</p>	<p>max-conc.: 30μM</p> <p>development phase: experimental</p>		<p>Vandetanib</p> <p>known targets: VEGFR, EGFR</p>	<p>max-conc.: 10μM</p> <p>development phase: phaseIII (NSCLC)</p>
	<p>UO-126</p> <p>known targets: MEK</p>	<p>max-conc.: 90μM</p> <p>development phase: experimental</p>		<p>Lapatinib</p> <p>known targets: ErbB2, EGFR</p>	<p>max-conc.: 10μM</p> <p>development phase: approved (breast cancer)</p>

Supplemental Figure 5

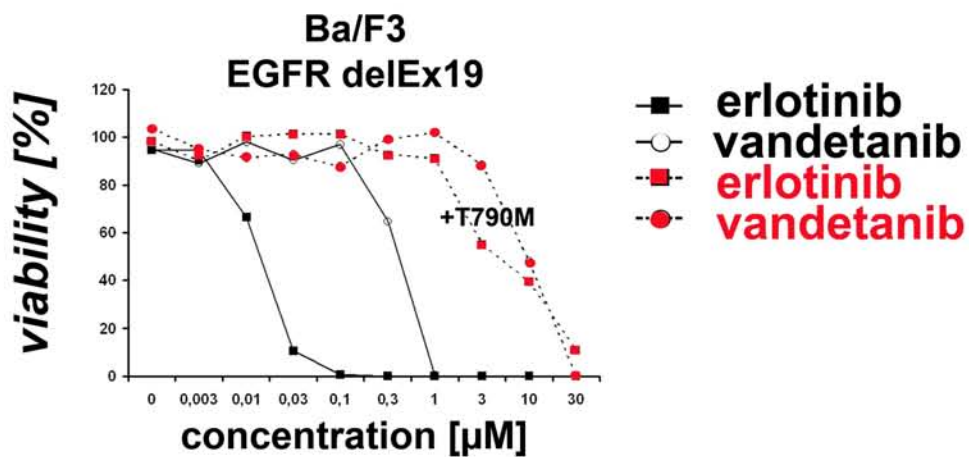
A



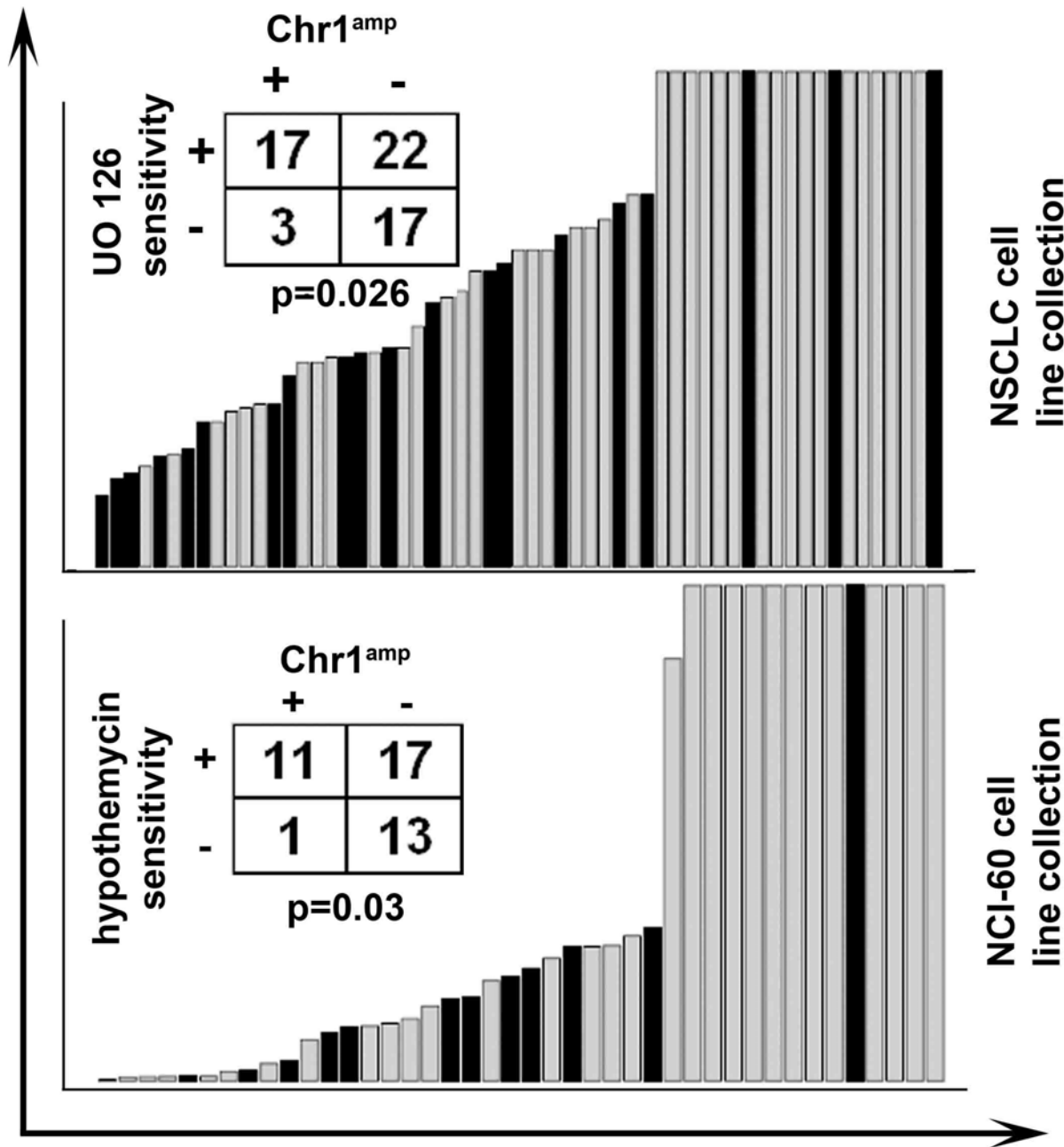
B



C

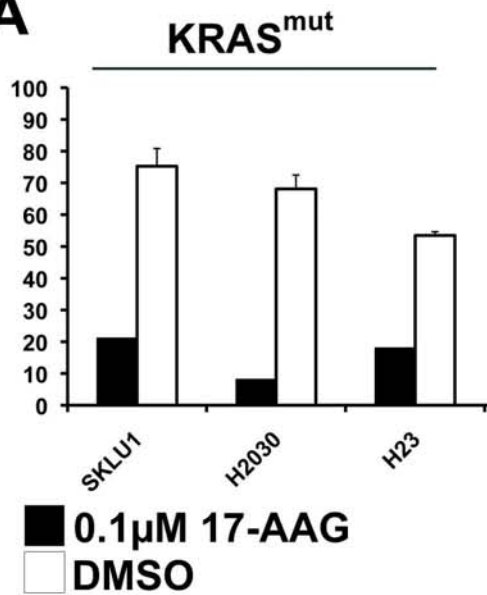


Supplemental Figure 6



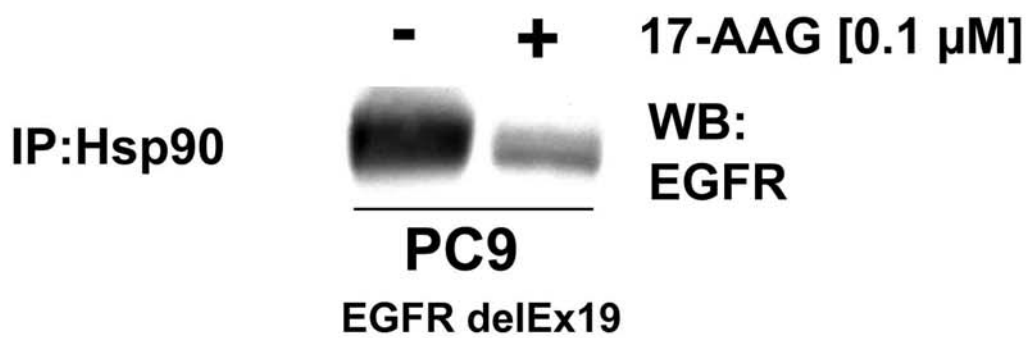
Supplemental Figure 7

A

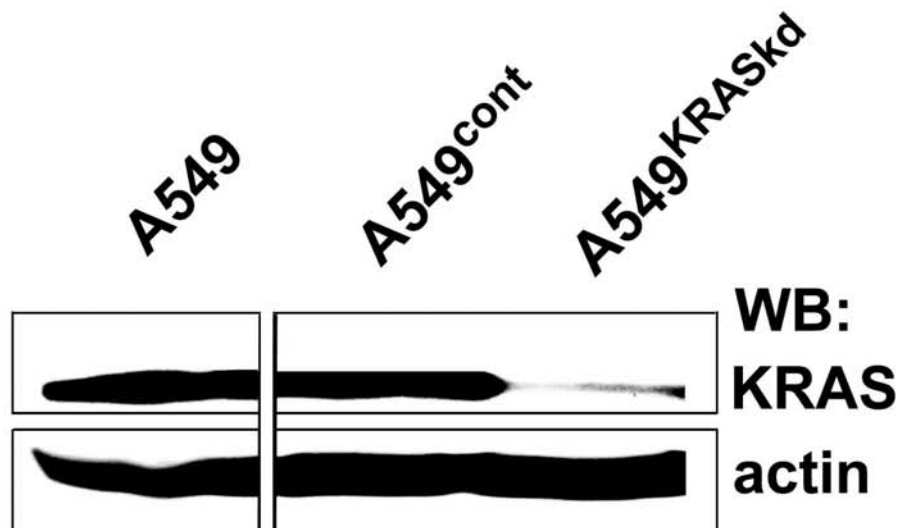


cell line	GI ₅₀ 17AAG [μM]	GI ₅₀ 17-DMAG [μM]	KRAS
H2030	0.0285	0.026	mut
H358	0.0355	0.0266	mut
SKLU1	0.0221	0.0097	mut
H1819	5.1286	1.6406	wt
H1838	4.6774	3.1989	wt
H322	0.0254	0.0243	wt
HCC15	0.0158	0.009	wt
HCC245	9.3325	1.9724	wt
HCC366	1	3.5075	wt

B

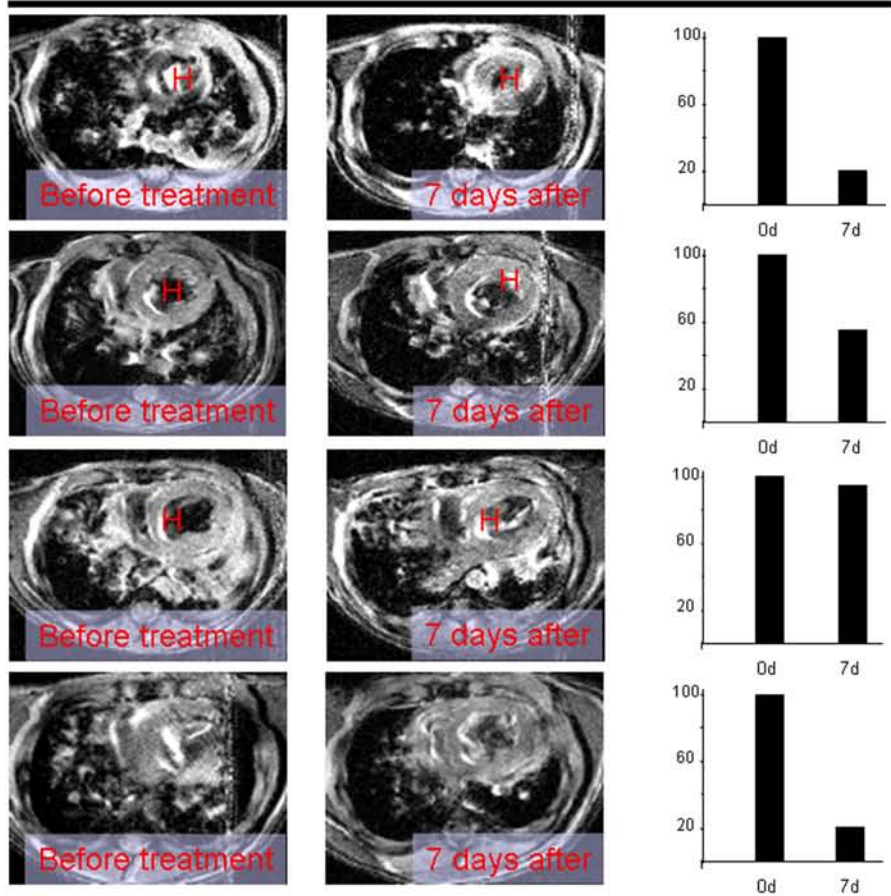


C

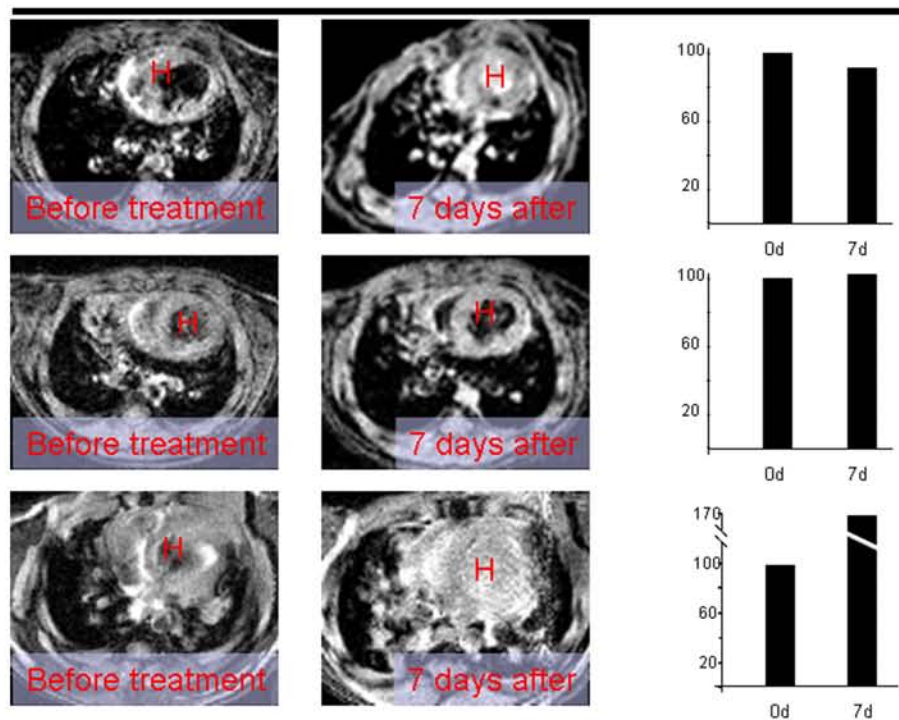


Supplemental Figure 8

17DMAG

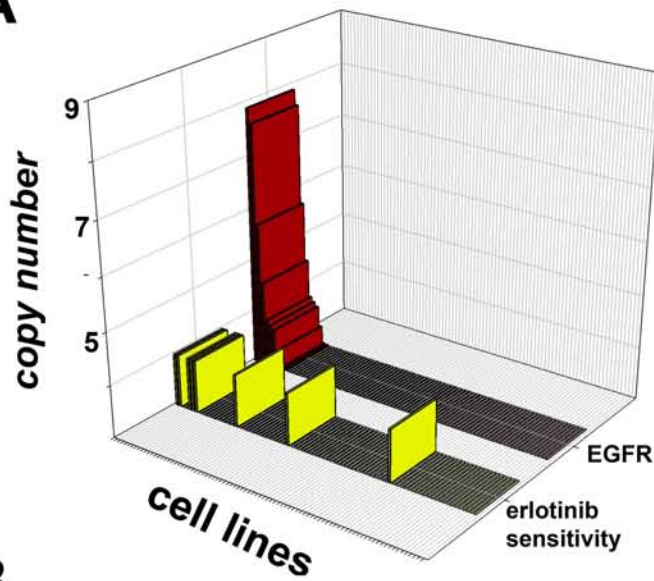


vehicle



Supplemental Figure 9

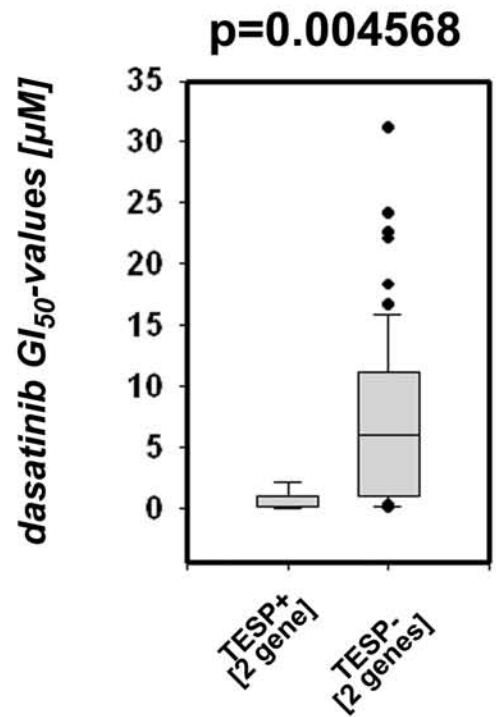
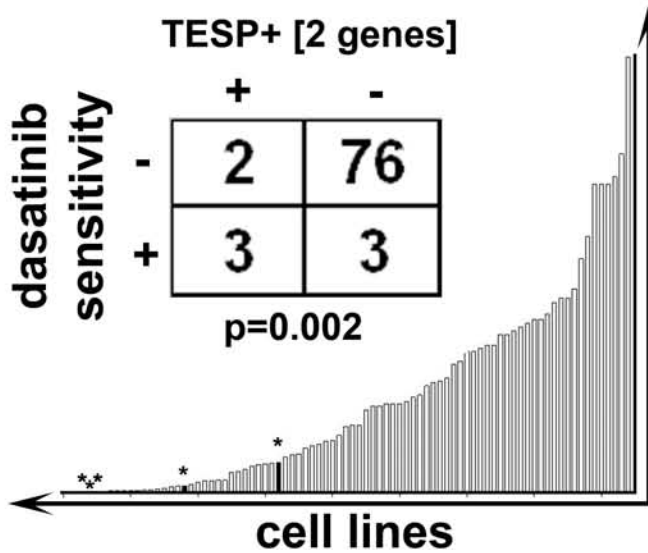
A



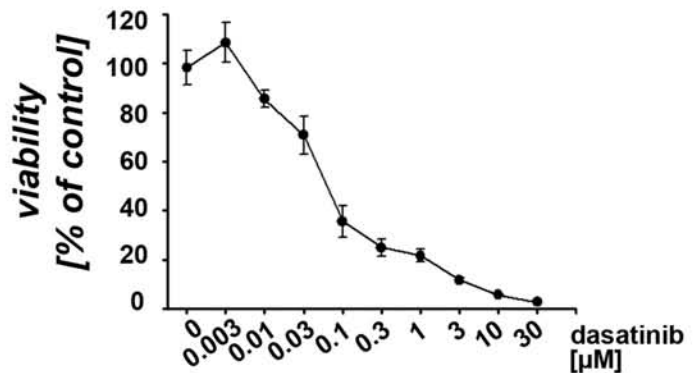
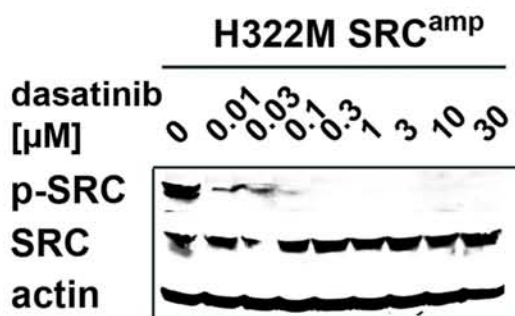
		EGFR amplification	
		-	+
erlotinib sensitivity	+	4	5
	-	70	3

p=0.00023

B

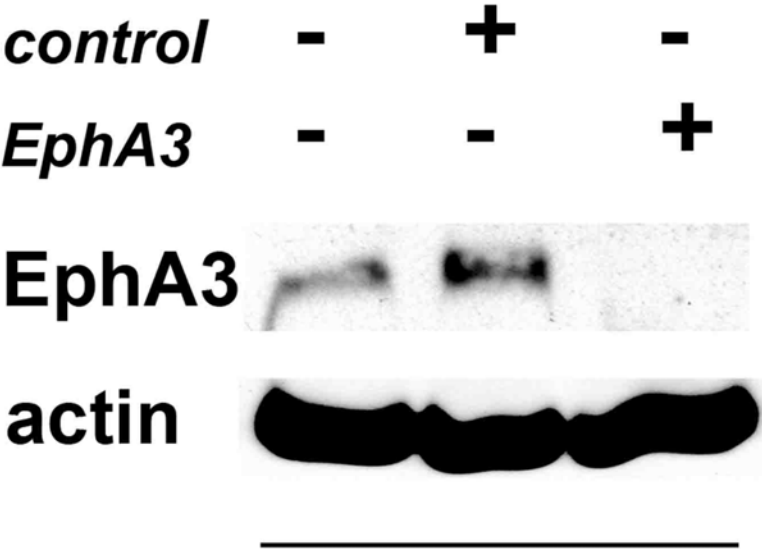


C



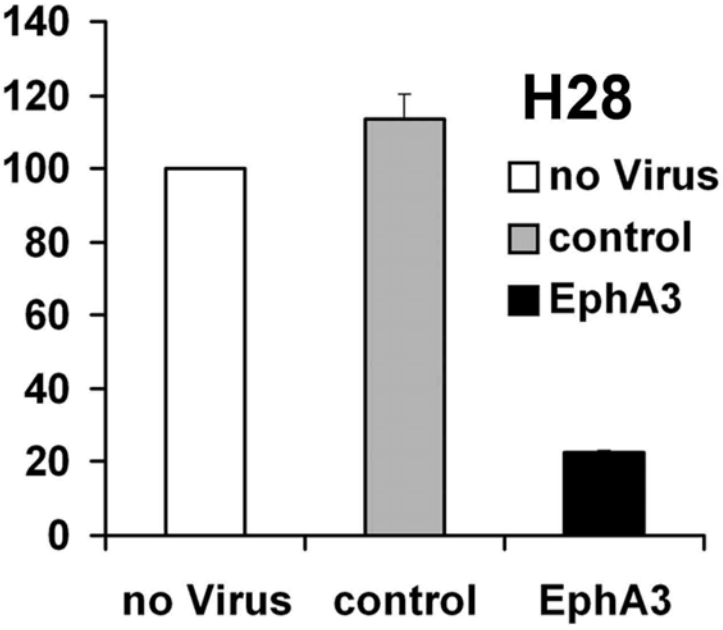
Supplemental Figure 10

A



H28

B



Supplemental Table 2: regions of significant copy number alteration

Regions of amplifications

copy number threshold ¹	Cytoband ²	FDR q-value	Wide Peak Region in DFC184 (Mb)	Cytoband in TSP ³	Wide Peak Region in TSP (Mb)	Genes in/near Region
2.1	1q21.3	<0.0001	150,542,795-151,338,045	1q21.2	143,482,820-149,412,049	<i>RAB13, ARNT</i>
2.1	2p14	0.0117	63,688,807-66,001,043	2p15	61.87-63.04	
2.1	3q26.2	<0.0001	170,629,278-171,814,156	3q26.2	171.56-172.26	<i>PIK3CA</i>
4.0	5p15.33	<0.0001	1-1,990,922	5p15.33	752,191-1,620,796	<i>TERT</i>
2.1	5p15.2	<0.0001	14,419,931-15,473,014	5p15.31	8,882,312-10,508,224	<i>TRIO</i>
2.1	6p21.33	0.0422	30,736,062-31,121,519	6p21.33	30-24-30.53	
2.1	7p11.2	<0.0001	54,648,126-55,149,035	7p11.2	54,648,493-55,520,504	<i>EGFR</i>
4.0	7q31.2	0.1456	115,731,478-117,706,917	7q21	91.38-92.69	<i>MET</i>
2.1	8q24.21	<0.0001	128,774,432-129,267,084	8q24.21	129,180,219-129,338,500	<i>MYC</i>
2.1	11q13.3	<0.0001	68,663,579-69,722,671	11q13.3	68,521,013-69,363,886	<i>CCND1</i>
2.1	12p11.23	<0.0001	27,363,810-27,548,427	12p12.1	24,985,489-25,781,318	<i>ARNTL2, KRAS</i>
2.1	12q14.1	0.0251	56,109,460-56,444,824	12q14.1	56,229,240-56,542,276	<i>CDK4</i>
4.0	12q12	0.1217	39,411,240-40,584,197			<i>CNTN1</i>
2.1	14q13.3	<0.0001	34,944,606-35,958,140	14q13.3	35,612,514-36,086,539	<i>MBIP, TITF1</i>
2.1	15q26.3	0.2168	98,087,320-100,338,915			
2.1	17q25.3	<0.0001	74,109,719-77,292,455			
4.0	17q21.1	0.0868	34,801,581-36,251,125	17q12	34,801,581-35,184,745	<i>ERBB2</i>
2.1	19q13.2	<0.0001	43,723,903-44,843,953			<i>MAP4K1</i>
2.1	20q11.21	<0.0001	29,620,040-29,834,552			
2.1	22q11.21	0.0003	18,249,977-20,297,872	22q11.21	19,057,364-20,130,954	<i>CRKL, PIK4CA</i>
copy number threshold ¹	Cytoband ²	FDR q-value	Wide Peak Region in DFC184 (Mb)	Cytoband in TSP ³	Wide Peak Region in TSP (Mb)	Genes in/near Region
2.1	2q22.1	<0.0001	141,719,224-141,796,375			<i>LRP1B</i>
2.1	3p14.2	<0.0001	60,423,632-60,473,926			<i>FHIT</i>
4.0	3p26.1	0.1126	4,696,625-4,779,198			<i>ITPR1</i>
2.1	4q22.1	<0.0001	92,179,849-92,538,585			
2.1	6q22.3	0.0002	124,244,289-131,275,700			
2.1	8p23.3	<0.0001	773,665-3,127,121	8p23.2	2,536,925-3,946,831	<i>CSMD1</i>
2.1	9p21.3	<0.0001	22,009,130-22,014,350	9p21.3	21,797,995-22,194,444	<i>CDKN2A/CDKN2B</i>
2.1	9p23	0.0004	9,312,827-9,383,042	9p23	9,400,074-10,398,148	<i>PTPRD</i>
2.1	10p14	<0.0001	8,778,915-11,619,551			
2.1	11p12	0.0118	chr11:39257589-40231417			
2.1	12p12.1	0.2082	22844630-23030954			
2.1	13q21.1	<0.0001	54,838,383-55,162,968			
4.0	13q12.11	0.0059	18,425,674-18,807,764			<i>TUBA2</i>
2.1	15q12	0.0677	23,653,373-23,942,257			
2.1	16q23.1	0.0003	77,121,334-7,7191,551			<i>WWOX</i>
2.1	17p12	0.0184	13,267,969-14,095,575			
2.1	18q22.3	<0.0001	66,736,766-69,429,889			
2.1	18q12.1	0.1253	24,117,347-24,520,932			
2.1	19p13.3	0.0249	1-530,099			
2.1	20p12.2	0.0003	10336942-10589574			
4.0	21q11.2	0.0001	14415233-14570355			
2.1	21q21.1	<0.0001	20,200,989-20,525,154			
2.1	22q13.32	0.0609	47,431,241-47,858,705			

¹ The GISTIC algorithm was run using two different copy number thresholds to assign genomic segments across the SNP data based on the GLAD (Gain and Loss Analysis of DNA) segmentation algorithm (Phipps et al., 2004). Copy number thresholds were set for copy number 4 (GLAD 16) and copy number 2.14 (GLAD 16.14). Analysis in this study was performed based on results derived from GISTIC using copy number 16.14.

² based on hg17 human genome assembly

³ regions of significant copy number gain and loss in primary lung adenocarcinomas (Weir et al., 2007)

Lesion	Lesion Type	Cytoband
RAB13, ARNT	amplification	1q21.3
	amplification	2p14
PIK3CA	amplification	3q26.2
TRIO	amplification	5p15.2
	amplification	6p21.33
EGFR	amplification	7p11.2
MYC	amplification	8q24.21
CCND1	amplification	11q13.3
ARNTL2, KRAS	amplification	12p11.23
	amplification	12q14.1
MBIP, TITF1	amplification	14q13.3
	amplification	15q26.3
	amplification	17q25.3
MAPK4K1	amplification	19q13.2
	amplification	20q11.21
CRKL, PK4CA	amplification	22q11.21
LRP1B	deletion	2q22.1
FHT	deletion	3p14.2
	deletion	4q22.1
	deletion	6q22.3
CSMD1	deletion	8p23.3
CDKN2A/CDKN2B	deletion	9q21.3
PTPRD	deletion	9p23
	deletion	10p14
	deletion	11p12
	deletion	12p12.1
	deletion	13q21.1
	deletion	15q12
WFOX	deletion	16q23.1
	deletion	17p12
	deletion	18q22.3
	deletion	18q12.1
	deletion	19p13.3
	deletion	20p12.2
	deletion	21q21.1
	deletion	22q13.32

copy number 2, 14 threshold 0.5

Lesion	Lesion Type	Cytoband
A427		
A549		
CAM3		
Cam6		
Cd66b9		
EXX		
HI299		
HI355		
HI383		
HI437		
HI563		
HI578		
HI648		
HI650		
HI724		
HI755		
HI770		
HI819		
HI915		
HI944		
HI975		
HI009		
HI030		
HI052		
HI087		
HI110		
HI122		
HI172		
HI228		
HI244		
HI282		
HI287		
HI312		
HI324		
HI325		
HI358		
HI460		
HI520		
HI522		
HI531		
HI647		
HI661		
HI681		
HCC1171		
HCC1195		
HCC1359		
HCC1833		
HCC1833		
HCC1913		
HCC2429		
HCC2450		
HCC2935		
HCC386		
HCC4006		
HCC441		
HCC451		
HCC515		
HCC718		
HCC957		
HOP62		
HOP910		
LCC37W		
LOAH91		
KO1		
SKLU		
	amplification	1q21.3
	amplification	2p14
	amplification	3q26.2
	amplification	5p15.2
	amplification	6p21.33
	amplification	7p11.2
	amplification	8q24.21
	amplification	11q13.3
	amplification	12p11.23
	amplification	12q14.1
	amplification	14q13.3
	amplification	15q26.3
	amplification	17q25.3
	amplification	19q13.2
	amplification	20q11.21
	amplification	22q11.21
	deletion	2q22.1
	deletion	3p14.2
	deletion	4q22.1
	deletion	6q22.3
	deletion	8p23.3
	deletion	9q21.3
	deletion	9p23
	deletion	10p14
	deletion	11p12
	deletion	12p12.1
	deletion	13q21.1
	deletion	15q12
	deletion	16q23.1
	deletion	17p12
	deletion	18q22.3
	deletion	18q12.1
	deletion	19p13.3
	deletion	20p12.2
	deletion	21q21.1
	deletion	22q13.32

Lesion	Lesion Type	Cytoband
A427	amplification	1q21.3
A449	amplification	2p14
A549	amplification	3q26.2
Calu3	amplification	5p15.2
Calu6	amplification	6p21.33
CO6869	amplification	7p11.2
EXX	amplification	8q24.21
H1299	amplification	11q13.3
H1535	amplification	12p11.23
H1538	amplification	12q14.1
H1437	amplification	14q13.3
H1563	amplification	15q26.3
H1578	amplification	17q25.3
H1648	amplification	19q13.2
H1650	amplification	20q11.21
H1724	amplification	22q11.21
H1755	deletion	2q22.1
H1770	deletion	3p14.2
H1819	deletion	4q22.1
H1915	deletion	6q22.3
H1944	deletion	8p23.3
H1975	deletion	9q21.3
H2009	deletion	9p23
H2030	deletion	10p14
H2052	deletion	11p12
H2070	deletion	12p12.1
H2110	deletion	13q21.1
H2126	deletion	15q12
H2172	deletion	16q23.1
H2228	deletion	17p12
H2347	deletion	18q22.3
H2444	deletion	18q12.1
H2882	deletion	19p13.3
H2887	deletion	20p12.2
H3122	deletion	21q21.1
H3224	deletion	22q13.32
H3255		
H338		
H460		
H520		
H522		
H526		
H647		
H661		
H662		
H663		
H664		
H665		
H666		
H667		
H668		
H669		
H670		
H671		
H672		
H673		
H674		
H675		
H676		
H677		
H678		
H679		
H680		
H681		
H682		
H683		
H684		
H685		
H686		
H687		
H688		
H689		
H690		
H691		
H692		
H693		
H694		
H695		
H696		
H697		
H698		
H699		
H700		
H701		
H702		
H703		
H704		
H705		
H706		
H707		
H708		
H709		
H710		
H711		
H712		
H713		
H714		
H715		
H716		
H717		
H718		
H719		
H720		
H721		
H722		
H723		
H724		
H725		
H726		
H727		
H728		
H729		
H730		
H731		
H732		
H733		
H734		
H735		
H736		
H737		
H738		
H739		
H740		
H741		
H742		
H743		
H744		
H745		
H746		
H747		
H748		
H749		
H750		
H751		
H752		
H753		
H754		
H755		
H756		
H757		
H758		
H759		
H760		
H761		
H762		
H763		
H764		
H765		
H766		
H767		
H768		
H769		
H770		
H771		
H772		
H773		
H774		
H775		
H776		
H777		
H778		
H779		
H780		
H781		
H782		
H783		
H784		
H785		
H786		
H787		
H788		
H789		
H790		
H791		
H792		
H793		
H794		
H795		
H796		
H797		
H798		
H799		
H800		
H801		
H802		
H803		
H804		
H805		
H806		
H807		
H808		
H809		
H810		
H811		
H812		
H813		
H814		
H815		
H816		
H817		
H818		
H819		
H820		
H821		
H822		
H823		
H824		
H825		
H826		
H827		
H828		
H829		
H830		
H831		
H832		
H833		
H834		
H835		
H836		
H837		
H838		
H839		
H840		
H841		
H842		
H843		
H844		
H845		
H846		
H847		
H848		
H849		
H850		
H851		
H852		
H853		
H854		
H855		
H856		
H857		
H858		
H859		
H860		
H861		
H862		
H863		
H864		
H865		
H866		
H867		
H868		
H869		
H870		
H871		
H872		
H873		
H874		
H875		
H876		
H877		
H878		
H879		
H880		
H881		
H882		
H883		
H884		
H885		
H886		
H887		
H888		
H889		
H890		
H891		
H892		
H893		
H894		
H895		
H896		
H897		
H898		
H899		
H900		
H901		
H902		
H903		
H904		
H905		
H906		
H907		
H908		
H909		
H910		
H911		
H912		
H913		
H914		
H915		
H916		
H917		
H918		
H919		
H920		
H921		
H922		
H923		
H924		
H925		
H926		
H927		
H928		
H929		
H930		
H931		
H932		
H933		
H934		
H935		
H936		
H937		
H938		
H939		
H940		
H941		
H942		
H943		
H944		
H945		
H946		
H947		
H948		
H949		
H950		
H951		
H952		
H953		
H954		
H955		
H956		
H957		
H958		
H959		
H960		
H961		
H962		
H963		
H964		
H965		
H966		
H967		
H968		
H969		
H970		
H971		
H972		
H973		
H974		
H975		
H976		
H977		
H978		
H979		
H980		
H981		
H982		
H983		
H984		
H985		
H986		
H987		
H988		
H989		
H990		
H991		
H992		
H993		
H994		
H995		
H996		
H997		
H998		
H999		
H1000		

Lesion	Lesion Type	Cytoband
A427	amplification	1q21.3
A449	amplification	2p14
A491	amplification	3q26.2
CAM3	amplification	5p15.2
CAM6	amplification	6p21.33
CAM9	amplification	7p11.2
CAM16	amplification	8q24.21
CAM19	amplification	11q13.3
CAM20	amplification	12p11.23
CAM21	amplification	12q14.1
CAM22	amplification	14q13.3
CAM23	amplification	15q26.3
CAM24	amplification	17q25.3
CAM25	amplification	19q13.2
CAM26	amplification	20q11.21
CAM27	amplification	22q11.21
CAM28	deletion	2q22.1
CAM29	deletion	3p14.2
CAM30	deletion	4q22.1
CAM31	deletion	6q22.3
CAM32	deletion	8p23.3
CAM33	deletion	9q21.3
CAM34	deletion	9p23
CAM35	deletion	10p14
CAM36	deletion	11p12
CAM37	deletion	12p12.1
CAM38	deletion	13q21.1
CAM39	deletion	15q12
CAM40	deletion	16q23.1
CAM41	deletion	17p12
CAM42	deletion	18q22.3
CAM43	deletion	18q12.1
CAM44	deletion	19p13.3
CAM45	deletion	20p12.2
CAM46	deletion	21q21.1
CAM47	deletion	22q13.32

copy number 2.14 threshold 1.0

Lesion	Lesion Type	Cytoband
RAB13, ARNT	amplification	1q21.3
PK3CA	amplification	1q22.1
TERT	amplification	5p13.33
TRIO	amplification	9p11
EGFR	amplification	9p14.3
EGFR	amplification	8q21.2
EGFR	amplification	7p11.2
EGFR	amplification	7q22.3
EGFR	amplification	7q31.2
MYC	amplification	8q24.21
MYC	amplification	8p12
MYC	amplification	8q21.11
CCND1	amplification	11q13.3
CCND1	amplification	11q22.3
CCND1	amplification	11p13
ARNTL2, KRAS	amplification	12p11.23
KRAS	amplification	12q14.1
KRAS	amplification	12q12
KRAS	amplification	12q14.3
MBIP, TTF1	amplification	14q13.3
TTF1	amplification	17q21.1
MAPK4K1	amplification	19q13.2
MAPK4K1	amplification	19q13.31
MAPK4K1	amplification	19q13.11
MAPK4K1	amplification	20q11.22
MAPK4K1	amplification	20q11.21
MAPK4K1	amplification	20q13.33
MAPK4K1	amplification	22q12.1
CRKL, PIK4CA	amplification	22q11.21
PIK4CA	amplification	22q11.21
LRP1B	deletion	2q22.1
FHIT	deletion	3p14.2
FHIT	deletion	3p14.2
FHIT	deletion	3q13.31
FHIT	deletion	3p26.1
FHIT	deletion	3p14.2
FHIT	deletion	4q22.1
FHIT	deletion	4q24.3
FHIT	deletion	6q25.3
FHIT	deletion	6q22.31
EPHA7	deletion	6q16.1
CSDM1	deletion	9p23.3
CSDM1	deletion	9p12
CDKN2A/CDKN2B	deletion	12q13
PTPRD	deletion	10p23
PTPRD	deletion	10q13
PTPRD	deletion	10q13
PTPRD	deletion	10q14
PTPRD	deletion	10q21.1
PTPRD	deletion	11q14.1
PTPRD	deletion	11p12
PTPRD	deletion	12q13.11
PTPRD	deletion	12p12.1
PTPRD	deletion	13q21.1
PTPRD	deletion	13q12.11
PTPRD	deletion	16q23.1
PTPRD	deletion	17p12
PTPRD	deletion	18q22.3
PTPRD	deletion	18q12.1
PTPRD	deletion	18q12.3
PTPRD	deletion	20p12.2
PTPRD	deletion	20p11.22
PTPRD	deletion	21q11.2
PTPRD	deletion	21q21.1

Lesion	Lesion Type	Copy Number
RAB13, ARNT	amplification	1q21.3
PKC3CA	amplification	1p22.1
TERT	amplification	3p21.2
9p11	amplification	9p13.3
TTRIO	amplification	9p11
9p14.3	amplification	9p14.3
9q21.2	amplification	9q21.2
EGFR	amplification	7p11.2
7p22.3	amplification	7p22.3
7q31.2	amplification	7q31.2
MYC	amplification	8q24.21
9p12	amplification	9p12
9q21.11	amplification	9q21.11
CCND1	amplification	11q13.3
11q22.3	amplification	11q22.3
11p13	amplification	11p13
ARNTL2, KRAS	amplification	12p11.23
12q14.1	amplification	12q14.1
12q12	amplification	12q12
12q14.3	amplification	12q14.3
MBIP, TITF1	amplification	14q13.3
17q21.1	amplification	17q21.1
MAPK4K1	amplification	19q13.2
19q13.31	amplification	19q13.31
19q13.11	amplification	19q13.11
20q11.22	amplification	20q11.22
20q11.21	amplification	20q11.21
20q13.33	amplification	20q13.33
22q12.1	amplification	22q12.1
CRKL, PKC3CA	amplification	22q11.21
LRP1B	deletion	2q22.1
FH1T	deletion	3p14.2
FH1T	deletion	3p14.2
3q13.31	deletion	3q13.31
3p26.1	deletion	3p26.1
FH1T	deletion	3p14.2
4q22.1	deletion	4q22.1
4q34.3	deletion	4q34.3
6q25.3	deletion	6q25.3
6q22.31	deletion	6q22.31
EPHA7	deletion	6q16.1
C5MD1	deletion	9p23.3
9p12	deletion	9p12
CDKN2A/ CDKN2B	deletion	9q21.3
PTPRD	deletion	9p23
9q21.3	deletion	9q21.3
9q24.3	deletion	9q24.3
10p14	deletion	10p14
10q21.1	deletion	10q21.1
11q14.1	deletion	11q14.1
11p12	deletion	11p12
12q13.11	deletion	12q13.11
12q12.1	deletion	12q12.1
13q21.1	deletion	13q21.1
13q12.11	deletion	13q12.11
16q23.1	deletion	16q23.1
17p12	deletion	17p12
18q22.3	deletion	18q22.3
18q12.1	deletion	18q12.1
18q12.3	deletion	18q12.3
20p11.22	deletion	20p11.22
20p11.2	deletion	20p11.2
21q21.1	deletion	21q21.1

Lesion	Lesion Type	Cytoband
RAB13, ARNT	amplification	1q21.3
PK3CA	amplification	12p21.1
TERT	amplification	5p13.33
TTRIO	amplification	9p11
EGFR	amplification	8q21.2
EGFR	amplification	7p11.2
EGFR	amplification	7q22.3
EGFR	amplification	7q31.2
MYC	amplification	8q24.21
MYC	amplification	8p12
MYC	amplification	8q21.11
CCND1	amplification	11q13.3
CCND1	amplification	11q22.3
CCND1	amplification	11p13
ARNTL2, KRAS	amplification	12p12.3
KRAS	amplification	12q14.1
KRAS	amplification	12q12
KRAS	amplification	12q14.3
MBIP, TTF1	amplification	14q13.3
TTF1	amplification	17q21.1
MAPK4K1	amplification	19q13.2
MAPK4K1	amplification	19q13.31
MAPK4K1	amplification	19q13.11
MAPK4K1	amplification	20q11.22
MAPK4K1	amplification	20q11.21
MAPK4K1	amplification	20q13.33
MAPK4K1	amplification	22q12.1
CRKL, PIK4CA	amplification	22q11.21
PIK4CA	amplification	22q11.21
LRP1B	deletion	2q22.1
FHIT	deletion	9p14.2
FHIT	deletion	9p14.2
FHIT	deletion	9q13.31
FHIT	deletion	9q26.1
FHIT	deletion	9p14.2
FHIT	deletion	4q22.1
FHIT	deletion	4q24.3
FHIT	deletion	6q25.3
FHIT	deletion	6q22.31
EPHA7	deletion	6q16.1
CSDM1	deletion	9p23.3
CSDM1	deletion	9p12
CDKN2A/CDKN2B	deletion	12q13
CDKN2B	deletion	12q13
PTPRD	deletion	9q21.3
PTPRD	deletion	9q21.3
PTPRD	deletion	9q24.3
PTPRD	deletion	10p14
PTPRD	deletion	10q21.1
PTPRD	deletion	11q14.1
PTPRD	deletion	11p12
PTPRD	deletion	12q13.11
PTPRD	deletion	12q12.1
PTPRD	deletion	13q21.1
PTPRD	deletion	13q12.11
PTPRD	deletion	16q23.1
PTPRD	deletion	17p12
PTPRD	deletion	18q22.3
PTPRD	deletion	18q12.1
PTPRD	deletion	18q12.3
PTPRD	deletion	20p12.2
PTPRD	deletion	20p11.22
PTPRD	deletion	21q11.2
PTPRD	deletion	21q21.1

Supplemental Table 4: Regions targeted by homozygous deletions and by LOH

	Cytoband ¹	Wide Peak Region NSCLC cell lines	# of Samples	Gene in/near region ²	Minimum copy number in NSCLC cell lines	Minimum copy number in primary tumors	
Homozygous deletions	2q22.1-22.2	141,736,502-141,981,932	7	<i>LRP1B</i>	0.24	1.09	
	3p14.2	60,497,972-60,531,766	5	<i>FHIT</i>	0.2	1.17	
	6q22.1	116,395,976-116,485,756	1	<i>FRK</i>	0.6	1.18	
	6q22.31	124,304,070-124,859,632	1	<i>TCBA1</i>	0.59	0.99	
	6q25.3	753,660-1,822,957	1	<i>FOXF2, FOXC1</i>	0.28	1.18	
	9p21.3	21,555,232-23,372,509	29	<i>CDKN2A, B/MTAP</i>	0.36	1	
	9p21.3	22,007,836-22,078,260	1	<i>MTAP</i>	0.35	0.72	
	9p23-p24.3	8,852,626-9,455,327	3	<i>PTPRD</i>	0.83	1.2	
	12p13.32	3,560,815-3,941,530	1	<i>PARP11</i>	0.31	1.1	
	13q12.11	18,450,473-19,585,127	2	<i>TUBA2, TPTE2</i>	0.23	1.22	
	13q12.11	20,468,202-20,533,722	1	<i>LATS2</i>	0.18	1.08	
	16q23.1	77,146,480-77,118,617	2	<i>WWOX</i>	0.45	1.34	
	19p13.2	11,020,096-11,088,326	1	<i>SMARCA4</i>	0.63	1.07	
	21q11.2	14,404,476-20,812,000	3	<i>SAMSN1</i>	0.24	1.14	
	Loss of heterozygosity	1p13.2	112,799,001-114,907,999	36	<i>ST7L</i>		
		3p21.31	41,524,901-43,273,999	44			
4q31.21		99,042,901-100,717,999	30	<i>TSPAN5</i>			
5q23.2		122,397,001-123,313,999	37				
6q21		105,555,001-106,650,999	40				
8p21.3		17,440,601-18,487,599	49	<i>PDGFRL, MTUS1, FGL1</i>			
9p22.3		13,716,301-15,107,499	62				
11p15.1		1-4,079,699	30	<i>CDKN1C, LRDD, SIRT3; NLRP6</i>			
³ 12p13.2		11,738,201-12,194,199	43	<i>BCL2L14</i>			
13q13.3		23,906,601-27,615,399	51	<i>CDK8, RNF6</i>			
15q15.1		38,817,001-39,299,099	41				
³ 17p13.3		1,967,741-3,996,889	69	<i>TP53</i>			
18q21.32		54,111,701-55,096,399	46	<i>BCL2L12</i>			
19p13.3		3,713,121-6,214,499	60	<i>MATK, DAPK3, PIAS4, UHRF1</i>			
20p11.23		17,969,501-18,745,999	39				
21q21.2		24,377,801-25,990,799	36				
³ 22q12.1	25,299,301-25,721,399	42	<i>SEZ6L</i>				

¹ based on hg17 human genome assembly

² selected genes in region encode putative tumor suppressor proteins and proteins involved in cell growth, cell cycle regulation and induction of apoptosis

³ copy neutral events

Supplemental Table 6: gene expression signature of EGFR mutated cell lines

probe set	gene	Accession	fold change	difference of means	P value
Z000008_s.at	GDP dissociation inhibitor 2	D13968	2	365.37	0.00015
Z000052_s.at	interleukin enhancer binding factor 2, 45kD	NM_004515	2.1	541.05	0.000008
Z5202.at	hydroxyethyl protein MG22821	AA022435	-2.47	-209.2	0.006553
Z001598.at	LYX1860 protein	AA022432	-2.48	-208.79	0.000002
Z000604_s.at	protein kinase, cAMP-dependent, regulatory, type I, alpha (tissue specific extrajumper 1)	AI632338	3.8	1004.25	0.000001
Z000607_s.at	RAD21 homolog (S. pombe)	M13468	3.17	300.05	0.000009
Z000637_s.at	tyrosine tyrosine phosphatase, receptor type F	BC628967	2.83	404.19	0.002722
Z000641_s.at	tyrosine 3-monooxygenase/tyrosinase/tyrosinase activation protein, zeta polypeptide	AF762627	2.77	188.46	0.000158
Z000659_s.at	DM1 (NSP40) homolog, subfamily B, member 1	U23964	2.13	1109.11	0.00012
Z000679_x.at	high-mobility group (HMG) domain, transcriptional corepressor 1	NM_0013128	2.13	219.35	0.000452
Z000722_s.at	membrane component, chromosome 11, surface marker 1	BC511760	2.59	672.87	0.000001
Z000730_s.at	protein tyrosine phosphatase type IVa, member 1	BC525784	2.13	232.16	0.000442
Z000745_s.at	protein tyrosine phosphatase (G protein), beta polypeptide 1	BC576710	2.88	187.82	0.000044
Z000758_x.at	calyculin A phosphodiesterase II, alpha	AF076603	3.16	470.96	0.000230
Z000841_s.at	glutathione S-transferase Kappa synthetase	U026591	2.38	228.81	0.000546
Z000852_s.at	guanine nucleotide binding protein (G protein), beta polypeptide 2	AI426272	-2.01	-181.823	0.002722
Z000900_s.at	mannose-6-phosphate receptor (GlcNAc dependent)	NM_005273	2.04	100.42	0.000001
Z000920_s.at	B-cell translocation gene 1, anti-proliferative	AI583537	8.89	642.73	0.000175
Z000927_s.at	KDEL (Yps4sp-Glc-1eu) endoplasmic reticulum protein retention receptor 1	AI535380	2.8	393.44	0.000091
Z000976_s.at	Interleukin 13	NM_006801	1.68	196.15	0.001342
Z000982_s.at	annexin A6	NM_006624	-2.01	-181.823	0.002722
Z001008_s.at	thioredoxin interacting protein	NM_0011155	3.14	167.04	0.008404
Z01040.at	guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 2	AA412232	6.97	179.07	0.003001
Z01045_s.at	putative human H. A class I associated protein 1	NM_002070	2.05	188.7	0.000379
Z01104_x.at	hypothetical protein	NM_0056505	2.73	165.88	0.000111
Z01118.at	phosphoglucosyltransferase	NM_015383	2.73	529.71	0.000020
Z01123_s.at	epididymal translocation initiation factor 5A	NM_002631	2.6	586.55	0.00004
Z01131_s.at	cathepsin 1, type 1, E-cadherin (epithelial)	NM_004360	-2.14	-1131.33	0.000691
Z01167_x.at	Rho GDP dissociation inhibitor (GDI) alpha	D13969	16.74	121.35	0.000452
Z01211_s.at	DEAD/DF (Asp-Glu-Ala-Gly) box polypeptide 3	AI47713	2.96	138.01	0.000147
Z01224_s.at	serine arginine repetitive matrix 1	NM_002654	2.06	167.09	0.000084
Z01251.at	pyruvate kinase, muscle	AI768845	2.28	361.66	0.000341
Z01259_s.at	sva retrovirus-like protein	Z48199	-2.21	-162.341	0.000822
Z01266.at	sva retrovirus-like protein	AF076702	-2.41	-200.972	0.000012
Z01337_s.at	guanine nucleotide binding protein 3 (cellular)	NM_004784	3.06	164.56	0.000939
Z01348.at	guanine nucleotide binding protein 3 (cellular)	NM_002084	2.47	190.23	0.000121
Z01376_s.at	ubiquitin carboxyl-terminal esterase L1 (ubiquitin thioesterase)	AI591354	2.23	188.98	0.000804
Z01392_s.at	histone H4	BC531974	10.69	1747.63	0.000261
Z01456.at	RB33 binding unlinked by benzimidazoles 3 homolog (yasa)	AF076702	3.2	117.29	0.000261
Z01456.at	NAADPH dehydrogenase, quinone 1	AI160695	2.08	188.27	0.006878
Z01476_s.at	ribonucleotide reductase M1 polypeptide	AI625974	2.11	639.63	0.004103
Z01485_s.at	reticulocalbin 2, E3-hand calcium binding domain	AI625974	2.74	121.21	0.000003
Z01490_s.at	perforin 1	BC004892	2.28	324.73	0.006623
Z0151_s.at	Rhesus erythrocyte protein S-spectrin-binding protein	NM_005729	3.08	275.23	0.001502
Z0151_s.at	Rhesus erythrocyte protein S-spectrin-binding protein	U02628	2.6	227.04	0.001623
Z01565_s.at	inhibitor of DNA binding 2, dominant negative helix-loop-helix protein	NM_002166	3.55	324.73	0.000891
Z01635_s.at	nuclear phosphoprotein similar to S. cerevisiae Pwp1	BF796924	2.02	122.37	0.000004
Z01645.at	heparanin (heparan C, cytochrome)	AF90766	3.49	261.9	0.000004
Z01740.at	ubiquitin-conjugating enzyme E2, ubiquitin variant M1 (oncogene)	NM_002160	-5.76	-465.45	0.000083
Z01742_x.at	splicing factor, arginine/serine-rich 1 (splicing factor 2, alternative splicing factor)	BC109153	2.81	302.69	0.000018
Z01813_s.at	KIAA0210 gene product	NM_005924	3.2	443.92	0.000010
Z01841_s.at	heat shock 27kD protein 1	AI654161	2.94	147.48	0.000001
Z01869_s.at	translucan (beta-1)	NM_001540	-2.13	-227.362	0.000792
Z01916_s.at	glucuronidase (beta-1)	BF539392	2.04	113.21	0.001152
Z01968.at	thyroid hormone receptor-associated protein, 40k kDa subunit	AF148382	1.49	301.05	0.000262
Z02118_s.at	cornein III	AF011165	2.52	161.62	0.000003
Z02205.at	vesicolarin-stimulated phosphoprotein	AA541758	2.75	135.17	0.000018
Z02388_s.at	TRAM-like protein	NM_003370	2.4	102.4	0.001096
Z02388_s.at	TRAM-like protein	AB86461	2.08	107.56	0.000341
Z02435_s.at	cytochrome P450, subfamily 1 (cyp19c1-inducible), polypeptide 1 (gladsonia S. rimovii infantile)	NM_005426	3.38	212.68	0.000355
Z02435_s.at	cytochrome P450, subfamily 1 (cyp19c1-inducible), polypeptide 1 (gladsonia S. rimovii infantile)	AI154504	2.45	184.38	0.002541
Z02548_s.at	glutathione S-transferase M3 (brain)	NM_002882	2.94	791.96	0.000001
Z02554_s.at	neuronal protein 215	AI527430	2.25	425.8	0.004811
Z02847_s.at	U6 snRNA-associated small protein	NM_002524	2.31	111.25	0.000692
Z02844_s.at	triala binding protein 2 (beta3 isoform)	FA113503	2.43	243.61	0.000259
Z02855_s.at	solute carrier family 16 (monocarboxylic acid transporters), member 3	AI025261	3.65	113.43	0.000009
Z02975_s.at	KIAA078 protein	AI513917	7.43	350.39	0.000271
Z03007_x.at	lysosomal-associated membrane protein 2	N21138	2.6	154.35	0.000838
Z03007_x.at	lysosomal-associated membrane protein 2	AF077198	5.13	203.91	0.005304
Z03085_s.at	transforming growth factor, beta 1	NM_002294	-2.64	-446.59	0.000002
Z03109.at	ubiquitin-conjugating enzyme E2M (UBC2, yeast)	BC000125	3.92	240.42	0.000028
Z03109.at	ubiquitin-conjugating enzyme E2M (UBC2, yeast)	NM_003569	2.22	293.9	0.000058

probe set	gene	accession	fold change	difference of means	P value
Z03148_s_at	tissue mrfc-containing 14	NM_014788	-2.36	-256.14	0.003359
Z03173_s_at	hypothetical protein	AY068019	-2.89	-383.29	0.005509
Z03186_s_at	S100 calcium binding protein A4 (calcium protein, calvaculin, murine placental homolog)	NM_002961	3.84	556.29	0.005343
Z03277_s_at	DNA fragmentation factor 45 (DFF45)	NM_004401	2.17	122.21	0.00019
Z03291_at	Ccd4-NO1 transcription complex, subunit 4	NM_013316	-1.4832	-148.82	0.005522
Z03470_s_at	pleckstrin	NM_043595	2.41	189.96	0.001622
Z03497_s_at	PPAR binding protein	NM_004774	2.22	137.99	0.00483
Z03544_at	geranylgeranyl-halobutyl anionophore (atropin-1)	U42924	4.08	429.2	0.000493
Z03925_s_at	histone H2A, constitutive	NM_002604	2.49	437.22	0.000185
Z04004_at	PRK3, apoptosis, W71, regulator	A336206	3.26	331.65	0.00025
Z04014_at	distal specificity phosphatase 4	NM_001394	4.14	259.16	0.00232
Z04015_s_at	distal specificity phosphatase 4	BC026671	2.84	260.65	0.000526
Z04022_at	Nedd4-like ubiquitin-protein ligase	AK68780	-2.09	-198.48	0.00316
Z04151_s_at	glucuronidase 1, cytosolic, type I, member C1 (glucuronidyl dehydrogenase 1, 20-alpha (3-alpha)-hydroxy-	NM_001533	5.77	1732.75	0.000857
Z04254_s_at	vitamin D (1,25-dihydroxyvitamin D3) receptor	NM_000376	4.22	416.75	0.002451
Z04255_s_at	vitamin D (1,25-dihydroxyvitamin D3) receptor	AA772285	-4.66	-189.51	0.000337
Z04308_s_at	KIAA0329 gene product	NM_014844	-2.18	-160.319	0.004319
Z04344_s_at	Shee23 homolog A (S. cerevisiae)	NM_005344	3.49	103.28	0.00062
Z04352_s_at	UDP-glucanase 1, cytosolic	NM_028114	1.18	259.36	0.00026
Z04427_s_at	concentin vesicle membrane protein	NM_006815	6.75	448.61	0.000001
Z04466_s_at	synuclein alpha (non A4 component of amyloid precursor)	BC260394	5.94	133.66	0.001881
Z04491_at	phosphodiesterase 4D, cAMP-specific (phosphodiesterase E3 quince homolog, Diosophila)	IK0917	174.58	174.58	0.008435
Z04532_x_at	UDP-glucanase 1, cytosolic	NM_021027	2.09	4	0.004433
Z04561_at	UDP-galactose 4-epimerase	AF154830	7.97	268.61	0.001368
Z04581_s_at	UDP-glucose ceramide diacyltransferase	NM_003358	46.99	326.49	0.000792
Z04920_at	carbamoyl-phosphate synthetase 1, mitochondrial	AF154830	7.97	718.97	0.001092
Z04989_s_at	myoxvirus (Influenza) resistance 2, homolog of murine	BC305661	4.74	136.38	0.008603
Z04994_at	retinol factor 1 (lipase carrier, estrogen-inducible, scapina expressed in)	NM_002443	-2.82	-260.15	0.009054
Z05009_at	retinol factor 1 (lipase carrier, estrogen-inducible, scapina expressed in)	NM_002443	11.43	792.58	0.002255
Z05229_s_at	calculation factor C (Lentivirus polyomavirus homolog), cophilin	AA693336	6.2	241.97	0.000721
Z05321_at	elastinolytic transglutinin inhibitor factor 2, subunit 3 (gamma, SKD)	NM_001415	4.51	201.61	0.002109
Z05368_at	carbamoyl 9	NM_020980	2.07	426.93	0.001711
Z05653_at	carbamoyl 9	NM_001911	-2.9089	-527.02	0.001227
Z05656_s_at	CD85 antigen (CD28 antigen ligand 2, B7-2 antigen)	NM_008989	3.62	240.78	0.000077
Z05808_at	agglutinin beta-hydroxylase	NM_004318	12.28	120.07	0.000034
Z05967_at	H4 histone family, member G	NM_003542	6.69	378.22	0.001394
Z06057_x_at	Sarboiprom (qpl, H5, leukosialin, CD43)	NM_003173	2.43	274.89	0.005599
Z06094_x_at	UDP-glucosyltransferase 1 family, polypeptide A6	NM_001072	6.57	426.09	0.006864
Z06200_at	UDP-glucosyltransferase 1 family, polypeptide A6	NM_001072	5.82	260.38	0.009477
Z06245_s_at	histone H2B, constitutive	NM_000475	6.03	161.32	0.002616
Z07062_at	islet amyloid polypeptide, group B, member 1	NM_000415	2.24	247.66	0.000505
Z07138_at	P4D finger protein 2	NM_003592	2.99	976.4	0.000465
Z07657_x_at	karvobrenin (limpoin) beta 2	NM_002270	2.22	287.11	0.00006
Z07931_s_at	fructose-6-phosphate-2-fructose-6-phosphatase 2	NM_002412	-2.02	-418.54	0.000454
Z08078_s_at	transcription factor 8 (repress, interferon 1 expression)	NM_030751	4.45	556.1	0.000416
Z08091_s_at	thioredoxin protein DKF2654K18.22	NM_030755	-3.16	-1729.38	0.003017
Z08097_s_at	thioredoxin domain-containing	NM_030755	2.48	172.54	0.000443
Z08132_x_at	H4A8 associated transcript 2	NM_004638	2.49	227.18	0.000003
Z08353_s_at	FRS3 binding protein 8 (FRS3)	NM_012181	2.11	224.72	0.000205
Z08380_s_at	HM kinase homolog	NM_012181	2.27	140.15	0.003887
Z08393_x_at	conformation releasing hormone receptor 1	NM_004382	-11.27	-203.67	0.005077
Z08621_s_at	protein tyrosine phosphatase type IVA, member 2	BC795101	2.71	295.57	0.000817
Z08624_s_at	elastinolytic transglutinin inhibitor factor 4 gamma 1	BC965878	2.81	171.17	0.000433
Z08633_s_at	hyaluronan synthase 2, cytosolic, beta subunit (hyaluronan synthase 2, cytosolic)	BC61032	2.33	271.38	0.003035
Z08661_s_at	tetratricopeptide repeat domain 3	AW510696	3.97	128.22	0.000003
Z08662_s_at	tetratricopeptide repeat domain 3	AB853338	2.56	332.05	0.000007
Z08677_s_at	lysine (Lys) blood group 2	AL550657	2.63	567.71	0.000131
Z08683_x_at	homodomain-containing 2	AA902787	2.35	350.67	0.000114
Z08750_x_at	Kelch repeat domain 1	BC965878	2.38	532.95	0.000016
Z08754_s_at	histoneone assembly protein 1-like 1	AL162068	2.19	212.92	0.000033
Z08765_s_at	histoneone assembly protein 1-like 1	NM_005828	2.79	471.25	0.00001
Z08794_s_at	histoneone nuclear ribonucleoprotein R	NM_025915	15.66	550.91	0.004663
Z08823_s_at	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 4	NF28196	-2.83	-617.05	0.001445
Z08825_s_at	chromosome 3 open reading frame 4	AF184799	4.33	866.06	0.000416
Z08925_s_at	chromosome 3 open reading frame 4	AF184799	2.11	152.78	0.000165
Z08962_s_at	stomatal anion channel 1	BC540552	2.18	241.96	0.000301
Z09023_x_at	nuclear receptor subfamily 2, group F, member 2	BC001765	2.28	184.96	0.000332
Z09160_at	histone H2B, constitutive	AK68780	2.07	233.18	0.002035
Z09161_at	histone H2B, constitutive	AK68780	4.74	942.01	0.000909
Z09185_s_at	histone H2B, constitutive	AK68780	2.74	460.310	0.001255
Z09278_s_at	tissue factor pathway inhibitor 2	L27624	2.03	866.25	0.004473
Z09344_at	tissue factor pathway inhibitor 2	BC002827	2.5	192.32	0.000495
Z09372_x_at	ubiquitin, beta polypeptide	BC971587	2.72	126.5	0.000488

probe set	gene	Accession	fold change	difference of means	P value
209385_s.at	proline synthetase co-transcribed (bacterial homolog)	AIJ36816	2.98	104.93	0.000132
209389_x.at	adipocyte reductase family 1, member C2 (dihydrodiol dehydrogenase 2, bile acid binding protein-3a)	U05598	1.18	1904.79	0.000226
209394_s.at	hypoxanthine phosphoribosyl transferase	AF13662	5.14	130.11	0.000411
209875_s.at	secreted phosphoprotein 1 (osteopontin, home salivaprotein, ebf1, Ectoplyctice activation 1)	U65248	23.88	647.47	0.004879
209895_s.at	hypoxanthine phosphoribosyl transferase	AF119855	3.4	106.25	0.000027
209896_s.at	hypoxanthine phosphoribosyl transferase	AF119855	3.01	239.56	0.000023
209912_s.at	KIAA0415 gene product	AB374854	-2.83	-103.32	0.007121
209942_s.at	methionine adenosyl transferase	BC000340	4.72	894.69	0.002216
210184_s.at	ECGF1 (secreted phosphoprotein 1, 220)	BC000340	4.72	894.69	0.002216
210185_s.at	ECGF1 (secreted phosphoprotein 1, 220)	BC000340	4.72	894.69	0.002216
210225_x.at	hepatocyte immunoglobulin-like receptor, subfamily B (with TM and ITM domain), member 3	BC005147	3.16	230.29	0.000023
210316_at	transcript 2, rat receptor-bound protein 10	U43143	-12.92	-342.25	0.0000019
210317_s.at	lysine 3-monoxygenase/hydroxylase 5-monoxygenase activation protein, avian polyprotein	U29346	5.07	693.61	0.000005
210334_x.at	lysine 3-monoxygenase/hydroxylase 5-monoxygenase activation protein, avian polyprotein	AB028869	3.49	362.53	0.000001
210347_s.at	ATC domain protein kinase catalytic, rat polyprotein	BC006471	2.84	161.82	0.000078
210438_x.at	Spermin synthase antigen A2 (GMD, demodiprotein and antigen S5A/MD)	M25077	2.68	165.58	0.000151
210457_x.at	high-mobility group (nonhistone chromosomal) protein isoforms and Y	AF76039	204.38	235.32	0.002667
210517_s.at	kinase (PRK) anchor protein (granin) 12	AB003476	8.33	440.9	0.000347
210543_s.at	protein kinase, DNA-activated, catalytic subunit	U34994	2.77	343.79	0.000023
210582_s.at	protein kinase, DNA-activated, catalytic subunit	AF008299	2.79	149.35	0.001385
210649_s.at	SMV/SNF related, matrix associated, actin dependent, esolator of chromatin, subfamily 1, member 1	AF231056	4.09	21.805	0.000002
210663_s.at	lysine 3-monoxygenase/hydroxylase 5-monoxygenase activation protein, avian polyprotein	BC000879	3.65	313.56	0.009627
210784_x.at	hepatocyte immunoglobulin-like receptor, subfamily B (with TM and ITM domain), member 1	AF009634	3.3	240.95	0.000031
210935_s.at	gpcr272954.1 / DHE-Hemo sapiens PNAS-29 mRNA, complete cds. / FEA-mRNA / TRD-PNAS-29 / D	AF274934	3.92	185.41	0.000065
210978_s.at	transcript 2, rat receptor-bound protein 10	BC006471	2.35	32.29	0.000117
211071_s.at	ALL1 related gene from chromosome 14	BC006471	2.58	354.23	0.000346
211135_x.at	hepatocyte immunoglobulin-like receptor, subfamily B (with TM and ITM domain), member 3	AF009644	3.92	272.98	0.000018
211136_s.at	clp1, lip and palte associated transmembrane protein 1	BC004865	2.3	203.51	0.002775
211162_x.at	stereocilia desaturase (delta 5-desaturase)	AF118616	2.95	262.61	0.000417
211164_s.at	stereocilia desaturase (delta 5-desaturase)	AF024400	2.91	120.17	0.000031
211182_x.at	hepatocyte immunoglobulin-like receptor, subfamily B (with TM and ITM domain), member 1	AF000424	2.08	113.67	0.000455
211600_at	protein tyrosine phosphatase, receptor type, O	U20489	2.12	1204.89	0.000007
211653_x.at	tdp43/3376.1 / DHE-Human pseudo-chloridrase reductase mRNA, complete cds. / FEA-mRNA / D/B	XR43376	9.14	1514.24	0.001456
211769_x.at	carboxypeptidase Y	BC006088	2.19	273.28	0.001047
211855_s.at	carboxypeptidase Y	AU174946	2.28	136.01	0.000068
212016_s.at	polyomavirus large binding protein (ependymoma nuclear ribonucleoprotein 1)	AA676988	4.79	238.55	0.000018
212073_at	calcium kinase 2, alpha 1, polypeptide	AF631874	2.44	122.017	0.000017
212081_x.at	allograft inflammatory factor 1	AF128756	2.51	247.84	0.000003
212092_at	preferentially expressed 10	BE55180	3.48	255.91	0.009685
212125_at	hep G1Pase activating protein 1	NM_012893	2.46	54.105	0.000059
212193_s.at	KIAA0231 protein	BE81529	3.09	289.44	0.000914
212218_s.at	F-box only protein 9	AB54041	2.69	451.24	0.001253
212229_s.at	F-box only protein 21	AC001699	2.51	111.48	0.000007
212251_at	Consensus includes dbA972475 / FEA+ST / D/B. XRF+dbI5769391 / D/B. XRF+estW40D09.X1 / C/D	AB972475	3.51	317.16	0.000005
212279_at	hypoxanthine phosphoribosyl transferase	BE729865	2.72	152.99	0.000018
212388_at	hypoxanthine phosphoribosyl transferase	AF057093	2.59	123.91	0.001926
212514_x.at	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 3	U83115	2.88	-827.62	0.002899
212559_at	protein kinase, cAMP-dependent, regulatory, type I, beta	AU148827	-2.96	-151.61	0.006795
212582_at	KIAA1451 protein	AU149473	3.49	188.39	0.000002
212648_at	hypoxanthine phosphoribosyl transferase	AF024400	2.72	120.17	0.000031
212906_at	Consensus includes dbI044440 / FEA+EST / D/B. XRF+gl381493 / D/B. XRF+estW40D09.X1 / C/D	BC044440	5.72	380.4	0.000105
213048_s.at	SEI Translocation (myeloid leukemia-associated)	W65693	2.83	92.58	0.000001
213350_at	ribosomal protein S11	BE60255	3.48	599.97	0.009181
213446_s.at	UQ motif containing GTPase activating protein 1	AF679073	2.85	110.9	0.00002
213605_s.at	hypoxanthine phosphoribosyl transferase	AF024400	2.81	164.42	0.000927
213720_s.at	SMV/SNF related, matrix associated, actin dependent, esolator of chromatin, subfamily A, member 4	AB81675	-2.31	-551.84	0.000385
213729_at	formin-binding protein 3	Z78308	2.12	266.72	0.000417
213872_s.at	hypoxanthine phosphoribosyl transferase	BC000340	2.03	110.37	0.000017
213885_s.at	Consensus includes dbA101156 / FEA+ST / D/B. XRF+gl4989056 / D/B. XRF+estW40D09.X1 / C/D	AF101156	7.57	464.4	0.000003
213886_s.at	Consensus includes dbA101156 / FEA+ST / D/B. XRF+gl4989056 / D/B. XRF+estW40D09.X1 / C/D	AF101156	7.57	464.4	0.000003
214007_s.at	protein tyrosine kinase 9	AA665024	5.89	159.34	0.000089
214030_at	hypoxanthine phosphoribosyl transferase	BE501352	-2.15	-260.32	0.009523
214041_x.at	ribosomal protein L37a	BE57772	2.78	268.95	0.004062
214091_s.at	glutathione peroxidase 3 (glutath)	AW149846	2.29	141.73	0.001607
214114_x.at	KIAA1198 protein 1A (I24D)	AF024400	-2.98	-120.91	0.000927
214213_x.at	lamin A/C	AA061189	2.81	230.23	0.000243
214305_s.at	splicing factor 3b, subunit 1, 1550	AW003030	3.32	165.95	0.000002
214463_x.at	H4 histone family, member D	NM_003541	-2.86	-195.68	0.000897
214543_x.at	homology of mouse quaking QKI (KH domain RNA binding protein)	AF142421	2.76	118.14	0.000023
214612_x.at	methionine adenosyl transferase	U108345	2.18	89.24	0.001919
214728_x.at	SMV/SNF related, matrix associated, actin dependent, esolator of chromatin, subfamily A, member 4	AC026573	-2.43	-844.68	0.001705
214791_at	Consensus includes dbA023116.1 / DHE-Homo sapiens cDNA FLJ3054.flc clone NTFR300152.2	AF257659	-2.98	-169.87	0.000161
214845_s.at	calpainin	576771	2.09	223.42	0.000247
214911_s.at	homodomain-containing 2	576771	2.09	299.15	0.000777

probe set	gene	Accession	fold change	difference of means	P value
214941_s.at	form-binding protein 3	AA675900	2.57	1.5451	0.000027
215052_at	KIAA0316 gene product	AA929767	2.99	217.09	0.00002
215072_x.at	Consensus includes gb:AF59847/FEA-EST/DB_XREF=gb:11981235/DB_XREF=gb:601852205/1	BR958447	2.65	270.58	0.000031
215256_s.at	protoporphyrin-binding protein assembly protein	AA929767	2.42	199.93	0.000028
215278_at	Consensus includes gb:AF52090/DB_XREF=hom sapiens clone 239530 mRNA sequence./FEA-mRNA/AA72117	AA72117	5.12	113.71	0.000281
215420_at	Indian Hedgehog homolog (Drosophila)	AF526990	-2.35	-220.99	0.000786
215434_x.at	hypothetical protein FLJ20719	BE691172	2.75	1173.32	0.00005
215714_s.at	Consensus includes gb:AF25482/DB-Homo sapiens SMART4 domain (SMART4) genes complete	AF25482	13.37	314.21	0.000003
215743_s.at	Consensus includes gb:AF25328/DB-Human DNA sequences from PAC clone 30P20 on chromosome Xq21.1	AF25328	-2.38	-463.54	0.002253
215794_s.at	Consensus includes gb:AF52543/DB-Homo sapiens cDNA FLJ19138 clone C00024/FEA-mRNA/AA70544	AA70544	2.01	118.62	0.000774
215826_x.at	Consensus includes gb:AK03017/DB-Homo sapiens cDNA FLJ2935 fs. clone NTZRP2005496.	AK03017	2.73	553.43	0.000089
216060_s.at	KIAA0666 protein	AK021890	-3.37	-395.55	0.000149
216239_s.at	PTH-responsive osteocalcin B1 protein	U97408	-4.06	-230	0.003357
216347_s.at	protein phosphatase 1, regulatory (inhibitor) subunit 3B	AK023188	-2.51	-155.03	0.001544
216468_x.at	KIAA0316 protein	AK023188	2.51	155.03	0.001544
216508_x.at	high-mobility group (enhancers chromosomal) protein 1	AC002277	2.11	108.72	0.000712
216534_s.at	enolase 1 (alpha)	U89968	2.02	293.76	0.000528
216591_s.at	succinate dehydrogenase complex, subunit C, integral membrane protein, 13SD	AF080579	3.23	159.07	0.000009
216594_x.at	ribonucleo reductase family 1, member C1 (dehydroxy dehydrogenase 1; 20-alpha (3-omega) hydroxysteroid C-17-20-lyase)	SS6290	8.28	1604.49	0.000295
216660_at	Consensus includes gb:AA73172/FEA-EST/DB_XREF=gb:274531/DB_XREF=est:Z87702.s1/CLD/AA73172	AA73172	-6.73	-246.72	0.000172
216971_s.at	pectate lyase (EC 3.2.1.49)	AF025454	2.42	126.72	0.000172
216981_x.at	spectin 1, intermediate filament binding protein, 500D	Z5367	1.5566	156.7	0.000397
217234_s.at	salpelin (gq4.115, leukoselin, C043)	AF199015	2.36	242.41	0.003976
217294_s.at	enolase 1 (beta)	U89968	4.45	316.57	0.00015
217298_x.at	ribon derived from H13.16) redundant histone core	U89968	3.59	1628.47	0.000018
217299_x.at	Consensus includes gb:AF574933/FEA-EST/DB_XREF=gb:246472/DB_XREF=est:UH-BL0-ubcd	AF574933	2.98	283.02	0.000189
217549_at	carbamoyl-phosphate synthetase 1, mitochondrial	AA0524933	3.62	333.59	0.000031
217607_x.at	Consensus includes gb:AA73172/FEA-EST/DB_XREF=gb:274531/DB_XREF=est:Z87702.s1/CLD/AA73172	AA73172	1016.91	352.33	0.004896
217635_s.at	Consensus includes gb:AA769006/FEA-EST/DB_XREF=gb:2820244/DB_XREF=est:CR010.S1/CLD/AA769006	AA769006	21.95	175.85	0.000801
217693_s.at	KAB31, member RAS oncogene family	NM_008588	3.08	100.23	0.000088
217699_s.at	pectatein homolog-like domain, family A, member 1	NM_007350	2.17	135.93	0.001335
218094_s.at	uncharacterized hypothetical protein HSNAP1	NM_018478	2.12	176.55	0.000493
218139_s.at	hypothetical protein FLJ10813	NM_018279	3.18	449.74	0.000735
218237_s.at	amino acid transporter system A1	NM_030674	-2.25	-264.13	0.007351
218273_s.at	prostate dehydrogenase phosphatase	NM_018644	2.33	123.21	0.004433
218356_at	F5d homolog 2 (F5d)	NM_013339	-2.38	-572.49	0.00386
218801_at	hypothetical protein FLJ20654	NM_017920	-2.09	-265.19	0.002176
218831_at	hypothetical protein PF5395	NM_021732	2.32	308.06	0.002784
218859_at	KIAA1685 protein	NM_018265	2.64	238.9	0.000103
218871_s.at	hypothetical protein FLJ22715	NM_022894	-2.52	-402.32	0.000127
218943_s.at	RNA helicase	NM_014514	3.64	-211.42	0.000023
219147_s.at	hypothetical protein FLJ20559	NM_017681	-2.39	-207.52	0.000963
219148_at	PDZ-binding kinase, T-cell oncogene protein kinase	NM_018492	2.25	184.1	0.000655
219209_at	melanoma differentiation associated protein 5	NM_022168	-3.13	-179.09	0.001273
219349_at	core 1 UDP-galactose-4-epimerase/alpha-D-beta 1,3-galactosyltransferase	NM_022156	-3.36	-560.59	0.000855
219664_s.at	2'-deoxyribose 5-phosphate-dependent proteinase	NM_020664	-2.03	-353.04	0.000311
219805_at	hypothetical protein FLJ22965	NM_022101	2.74	138.3	0.001237
219826_at	hypothetical protein FLJ23233	NM_024691	-2.25	-179.02	0.002053
219944_at	hypothetical protein FLJ20284	NM_017244	3.14	162.92	0.000005
220104_at	hypothetical protein FLJ26421	NM_020119	-2.75	-142.34	0.000541
220189_s.at	memoxy (alpha-1,3)-glycosyltransferase, isoenzyme B	NM_014275	2.78	386.34	0.000111
220204_s.at	hypothetical protein FLJ14351	NM_014275	2.78	386.34	0.000111
220240_s.at	hypothetical protein FLJ20523	NM_017905	2.19	313.84	0.000305
220293_x.at	hypothetical protein FLJ20354	NM_017729	4.56	105.53	0.000019
220392_s.at	HSP70L protein	NM_017729	2.76	105.53	0.000019
221039_s.at	development and differentiation enhancing factor 1	NM_018482	2.88	139.16	0.000884
221369_at	metaborn receptor 1A	NM_005958	3.81	108.32	0.000011
221423_s.at	hypothetical protein AF140225	NM_030799	2.01	102.81	0.000454
221473_x.at	transmembrane protein 19	U99188	2.34	291.97	0.000454
221829_s.at	synaptotagmin I, includes db:AK036008/1/DB-Homo sapiens cDNA FLJ23255 fs. clone RH016344/FEA-mRNA/AA07759	AA07759	2.09	132.75	0.000002
221829_s.at	synaptotagmin I, includes db:AK036008/2/DB-Homo sapiens cDNA FLJ23255 fs. clone RH016344/FEA-mRNA/AA07759	AA07759	2.88	348.98	0.000047
222204_s.at	DIZ2/PS66/104 protein	AI_10238	-2.26	-163.93	0.000532

