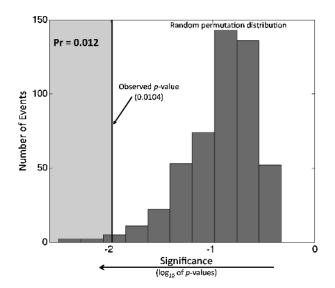


А

Sensitive

Resistant



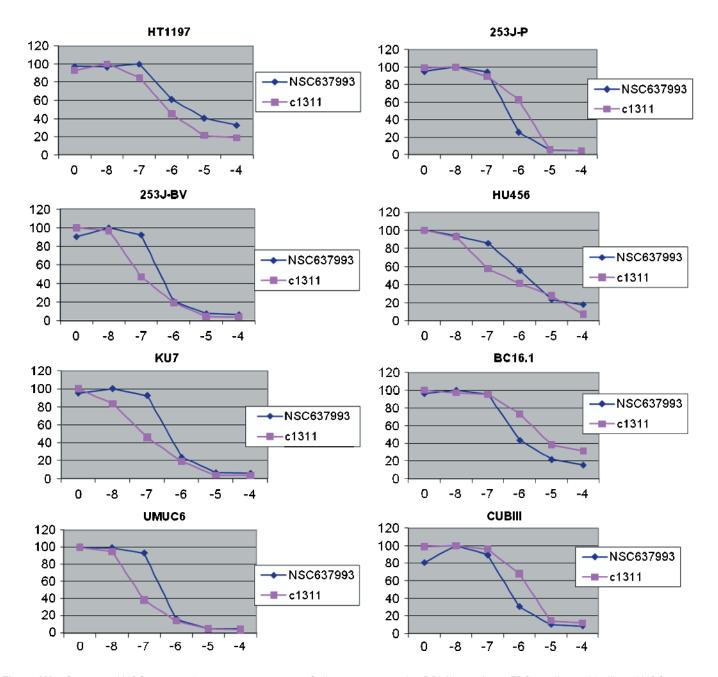
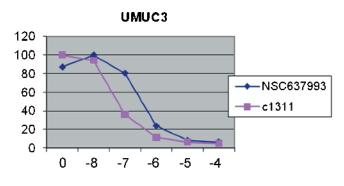
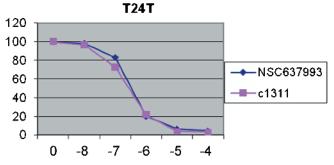
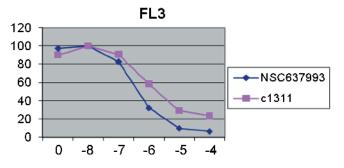
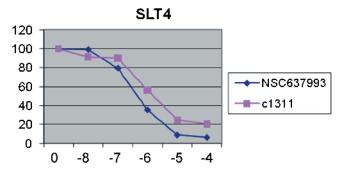


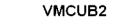
Figure W1. C1311 and NSC-637993 dose-response curves. Cells were exposed to RPMI 1640/10% FBS medium with diluted NSC-637993 or C1311 at concentrations of 0 (control), 0.01, 0.1, 1, 10, and 100 μ M; after 72 hours of culture, cell counts were assayed. Each concentration of drug was tested on six replicate wells in more than 4 individual experiments. Data presented below for each of the cell lines show percent of maximal cell growth (*y* axis) per drug, averaged across the four replicates, plotted against the log₁₀ treatment dose. These drug-response curves were used in Spline regression to estimate the IC₅₀ values presented in Figure 1*A* and Table W1 as described in Materials and Methods.

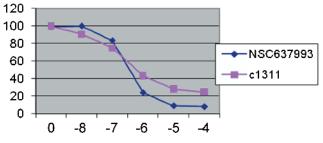












0

0

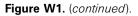
-8

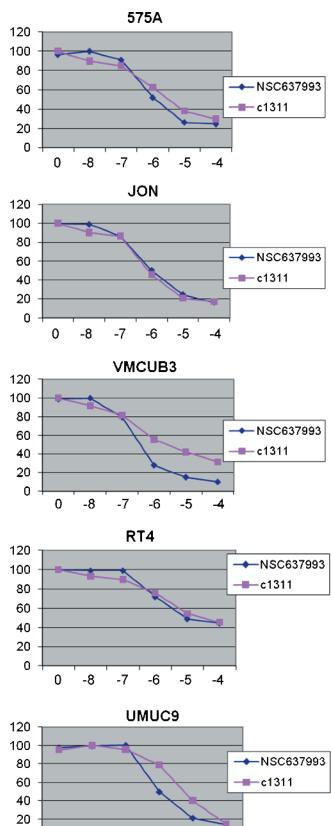
-7

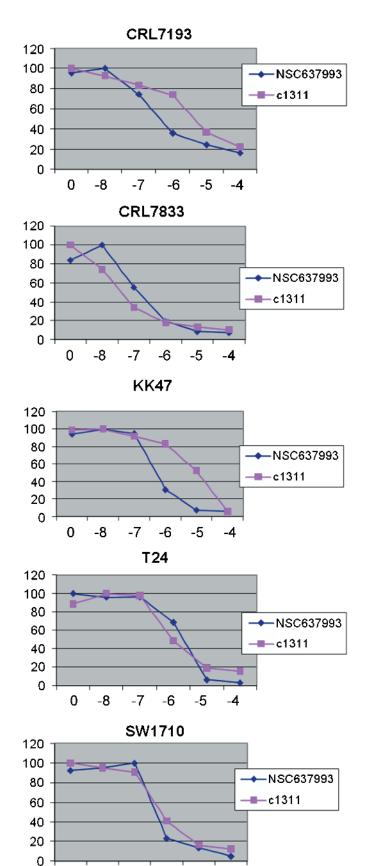
-6

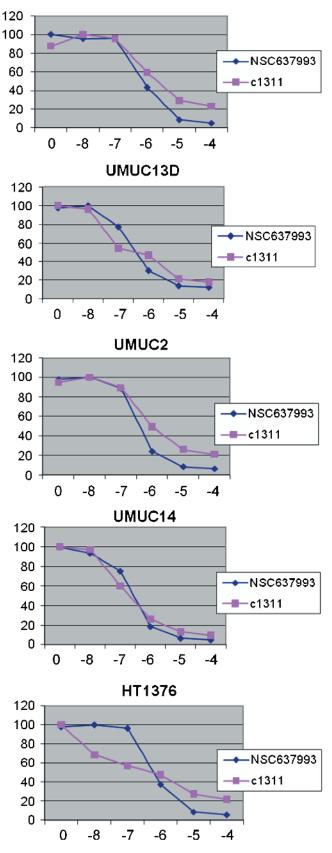
-5

-4









UMUC1

Figure W1. (continued).

0

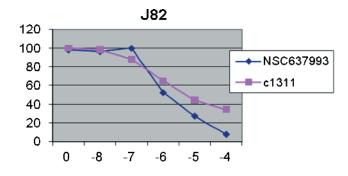
-8

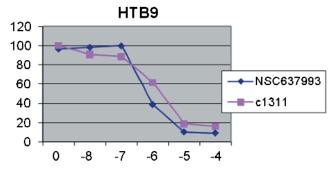
-7

-6

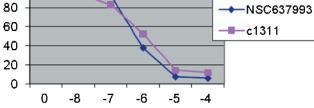
-5

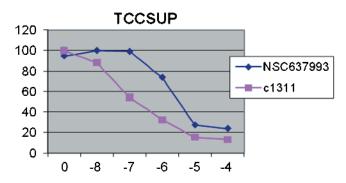
-4

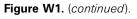












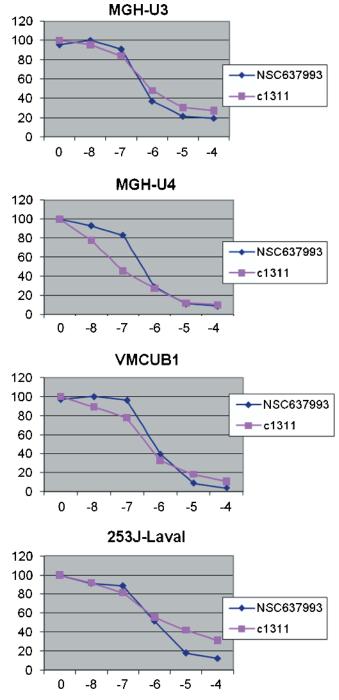


Table W1. Log10 IC50 Values for the BLA-40 Cell Line Panel.

| Cell Line* | C1311 | NSC-637993 [†] |
|------------|------------------|-------------------------|
| CRL7833 | -7.173 | -6.574 |
| KU7 | -6.954 | -6.378 |
| UMUC3 | -6.951 | -6.337 |
| UMUC6 | -6.923 | -6.281 |
| MGH-U4 | -6.874 | -6.187 |
| 253J-BV | -6.836 | -6.342 |
| TCCSUP | -6.682 | -5.193 |
| SCaBER | -6.671 | ‡ |
| UMUC14 | -6.651 | -6.641 |
| T24T | -6.622 | -6.604 |
| HU456 | -6.476 | -5.675 |
| UMUC3-E | -6.454 | + |
| VMCUB1 | -6.383 | -6.071 |
| UMUC13D | -6.353 | -6.361 |
| VMCUB2 | -6.197 | -6.433 |
| HT1376 | -6.137 | -5.959 |
| CRL2169 | -6.107 | + |
| SW1710 | -6.101 | -6.238 |
| JON | -5.972 | -5.926 |
| MGH-U3 | -5.965 | -6.033 |
| HT1197 | -5.949 | -5.245 |
| CRL2742 | -5.893 | -6.135 |
| UMUC2 | -5.781 | -6.425 |
| 253J-P | -5.727 | -6.320 |
| SLT4 | -5.676 | -6.273 |
| T24 | -5.656 | -5.610 |
| HTB9 | -5.645 | -5.946 |
| 253JLaval | -5.597 | -5.722 |
| VMCUB3 | -5.597 | -6.269 |
| CUBIII | -5.565 | -6.075 |
| FL3 | -5.448 | -6.404 |
| 575A | -5.418 | -5.634 |
| UMUC1 | -5.351 | -6.009 |
| CRL7193 | | -6.327 |
| J82 | -5.327 -5.269 | -5.648 |
| J82 PSI | | -5.648 ‡ |
| | -5.266 | |
| BC16.1 | -5.231 | -5.930 |
| UMUC9 | -5.180 | -5.751 |
| KK47 | -4.841 | -6.203 |
| RT4 | -4.722 | -4.672 |

*The BLA-40 cell line panel has been reported before [15].

[†]Reported IC₅₀ values for NSC-637993 [15] were recalculated using Spline regression and listed here for comparison between the related imidazoacridinones.

[‡]Four of the BLA-40 cell lines were not tested for NSC-637993 in the prior report.

Table W2. HFA Results for NSC-637993 (A) and NSC and Paclitaxel (B).

| (A) | | | | | | | | | |
|------------------|-----------|--|-----------------------|---------------|-----------------|--------------------------|---------------|----------------------|-----------------------|
| Tx | Cell Line | NSC Log ₁₀ IC ₅₀ | SC* | P^{\dagger} | IP^{\ddagger} | P^{\dagger} | | Overall [§] | Overall P^{\dagger} |
| NSC Alone | T24T | -6.60 | 62.7 | .005 | 71.6 | .000 |)6 | 61.3 | <.0001 |
| | FL3 | -6.40 | 66.0 | .0002 | 56.6 | <.000 | 01 | 67.2 | <.0001 |
| | UMUC1 | -6.00 | 88.9 | .2 | 54.9 | <.000 | 01 | 71.9 | .0115 |
| | KK47 | -6.20 | 118.0 | .04 | 107.8 | .000 |)2 | 112.8 | .0018 |
| (B) | | | | | | | | | |
| Tx | Cell Line | NSC Log ₁₀ IC ₅₀ | Paclitaxel Log10 IC50 | SQ* | P^{\dagger} | IP^{\ddagger} | P^{\dagger} | Overall | Overall P^{\dagger} |
| NSC + Paclitaxel | UMUC6 | -6.28 | -8.99 | 12.5 | <.0001 | 27.0 | <.0001 | 19.8 | <.0001 |
| | HTB9 | -5.94 | -8.93 | 20.6 | <.0001 | 8.1 | <.0001 | 14.4 | .0006 |
| | T24 | -5.61 | -7.36 | 62.8 | <.0001 | 28.3 | <.0001 | 45.6 | <.0001 |
| | KK47 | -6.20 | >-7 | 94.3 | .04 | 37.1 | <.0001 | 65.7 | .02 |

*Average percentage of control growth across four replicates at the subcutaneous implantation site.

[†]Two-tailed P value for single-sample t test against the hypothesis that the inhibition was 0%. [‡]Average percentage of control growth across four replicates at the intraperitoneal implantation site.

[§]Average percentage of control growth across all replicates and sites.

We have reported in vitro sensitivities to paclitaxel across the BLA-40 panel before [16].

Table W3. Union of Yeast Strains with Reduced Fitness in C1311 (A) and Benomyl (B) Treatment.

| Symbol | Description |
|----------------|--|
| (A) | |
| ACB1 | Acyl-CoA-binding protein, transports newly synthesized acyl-CoA esters from fatty acid synthetase (Fas1p-Fas2p) to acyl-CoA-consuming processes |
| ACE2 | Transcription factor that activates expression of early G1-specific genes, localizes to daughter cell nuclei after cytokinesis and delays G1 progression in daughters, localization is regulated by phosphorylation; potential Cdc28p substrate |
| ADO1 AIM22 | Adenosine kinase, required for the utilization of S-adenosylmethionine (AdoMet); may be involved in recycling adenosine produced through the methyl cycle Putative lipoate-protein ligase, required along with Lip2 and Lip5 for lipoylation of Lat1p and Kgd2p; similar to <i>E. coli</i> LpIA; null mutant displays reduced frequency of mitochondrial genome loss |
| AKR1 | Palmitovitoriania genome ross Palmitovi transferase involved in protein palmitovilation; acts as a negative regulator of pheromone response pathway; required for endocytosis of pheromone receptors; involved in cell shape control; contains ankyrin repeats |
| ALG13 | Catalytic component of UDP-GlcNAc transferase, required for the second step of dolichyl-linked oligosaccharide synthesis; anchored to the ER membrane through interaction with Alg14p; similar to bacterial and human glycosyltransferases |
| ARC15 | Subunit of the ARP2/3 complex, which is required for the motility and integrity of cortical actin patches |
| ARO1 | Pentafunctional arom protein, catalyzes steps 2 through 6 in the biosynthesis of chorismate, which is a precursor to aromatic amino acids |
| ARO2 | Bifunctional chorismate synthase and flavin reductase, catalyzes the conversion of 5-enolpyruvylshikimate 3-phosphate (EPSP) to form chorismate, which is a precursor to aromatic amino acids |
| BEM2 | Rho GTPase activating protein (RhoGAP) involved in the control of cytoskeleton organization and cellular morphogenesis; required for bud emergence |
| BEM4 | Protein involved in establishment of cell polarity and bud emergence; interacts with the Rho1p small GTP-binding protein and with the Rho-type GTPase Cdc42p; |
| DIM | involved in maintenance of proper telomere length |
| BIM1 | Microtubule-binding protein that together with Kar9p makes up the cortical microtubule capture site and delays the exit from mitosis when the spindle is oriented abnormally |
| BUD20 COY1 | Protein involved in bud site selection; diploid mutants display a random budding pattern instead of the wild-type bipolar pattern Golgi membrane protein with similarity to mammalian CASP; genetic interactions with GOS1 (encoding a Golgi snare protein) suggest a role in Golgi function |
| CPA1 | Small subunit of carbamoyl phosphate synthetase, which catalyzes a step in the synthesis of citrulline, an arginine procursor; translationally regulated by an attenuator peptide encoded by YOR302W within the CPA1 mRNA 5'-leader |
| CSR1 | Phosphatidylinositol transfer protein with a potential role in regulating lipid and fatty acid metabolism under heme-depleted conditions; interacts specifically with thioredoxin peroxidase; may have a role in oxidative stress resistance |
| CTF4 | Chromatin-associated protein, required for sister chromatid cohesion; interacts with DNA polymerase α (Pol1p) and may link DNA synthesis to sister chromatid cohesion |
| CYB5 | Cytochrome b5, involved in the sterol and lipid biosynthesis pathways; acts as an electron donor to support sterol C5-6 desaturation |
| DYN1 | Cytoplasmic heavy chain dynein, microtubule motor protein, required for anaphase spindle elongation; involved in spindle assembly, chromosome movement, and spindle orientation during cell division, targeted to microtubule tips by Pac1p |
| ERG2 | C-8 sterol isomerase, catalyzes the isomerization of the delta-8 double bond to the delta-7 position at an intermediate step in ergosterol biosynthesis |
| ERG25 | C-4 methyl sterol oxidase, catalyzes the first of three steps required to remove two C-4 methyl groups from an intermediate in ergosterol biosynthesis; mutants accumulate the sterol intermediate 4,4-dimethylzymosterol |
| ERG28 | Endoplasmic reticulum membrane protein, may facilitate protein-protein interactions between the Erg26p dehydrogenase and the Erg27p 3-ketoreductase and/or tether these enzymes to the ER, also interacts with Erg6p |
| ERG3 | C-5 sterol desaturase, catalyzes the introduction of a C-5(6) double bond into episterol, a precursor in ergosterol biosynthesis; mutants are viable, but cannot grow on nonfermentable carbon sources |
| ERG6 FEN2 | Delta(24)-sterol C-methyltransferase, converts zymosterol to fecosterol in the ergosterol biosynthetic pathway by methylating position C-24; localized to both lipid particles and mitochondrial outer membrane Plasma membrane H ⁺ -pantothenate symporter; confers sensitivity to the antifungal agent fenpropimorph |
| GCR2 | Transcriptional activator of genes involved in glycolysis; interacts and functions with the DNA-binding protein Gcr1p |
| GET2 | Subunit of the GET complex; involved in insertion of proteins into the ER membrane; required for the retrieval of HDEL proteins from the Golgi to the ER in an ERD2 dependent fashion and for meiotic nuclear division |
| GLO4 | Mitochondrial glyoxalase II, catalyzes the hydrolysis of S-D-lactoylglutathione into glutathione and D-lactate |
| GTR2 | Putative GTP binding protein that negatively regulates Ran/Tc4 GTPase cycle; activates transcription; subunit of EGO and GSE complexes; required for sorting of Gap1p; localizes to cytoplasm and to chromatin; homolog of human RagC and RagD |
| ISC1 | Mitochondrial membrane localized inositol phosphosphingolipid phospholipase C, hydrolyzes complex sphingolipids to produce ceramide; activated by phosphatidylserine, cardiolipin, and phosphatidylglycerol; mediates Na ⁺ and Li ⁺ halotolerance |
| MGA2 | ER membrane protein involved in regulation of OLE1 transcription, acts with homolog Spt23p; inactive ER form dimerizes and one subunit is then activated by ubiquitin/proteasome-dependent processing followed by nuclear targeting |
| MGM1 | Mitochondrial GTPase related to dynamin, present in a complex containing Ugo1p and Fzo1p; required for normal morphology of cristae and for stability of Tim11p; homolog of human OPA1 involved in autosomal dominant optic atrophy |
| MNN11 | Subunit of a Golgi mannosyltransferase complex that also contains Anp1p, Mnn9p, Mnn10p, and Hoc1p, and mediates elongation of the polysaccharide mannan backbone; has homology to Mnn10p |
| MNN9 MRPL16 | Subunit of Golgi mannosyltransferase complex also containing Anp1p, Mnn10p, Mnn11p, and Hoc1p that mediates elongation of the polysaccharide mannan backbone; forms a separate complex with Van1p that is also involved in backbone elongation Mitochondrial ribosomal protein of the large subunit |
| MSF1 | Mitochondrial photen of the targe subunit Mitochondrial phenylalanyl-tRNA synthetase, active as a monomer, unlike the cytoplasmic subunit which is active as a dimer complexed to a β -subunit dimer; similar to the α subunit of <i>E. coli</i> phenylalanyl-tRNA synthetase |
| NPT1 | Nicotinate phosphoribosyltransferase, acts in the salvage pathway of NAD [*] biosynthesis; required for silencing at rDNA and telomeres and has a role in silencing at mating-type loci; localized to the nucleus |
| PDX3 | Pyridoxine (pyridoxamine) phosphate oxidase, has homologs in E. coli and Myxococcus xanthus; transcription is under the general control of nitrogen metabolism |
| PER1 | Protein of the endoplasmic reticulum, required for GPI-phospholipase A2 activity that remodels the GPI anchor as a prerequisite for association of GPI-anchored proteins with lipid rafts; functionally complemented by human ortholog PERLD1 |
| PFY1 | Profilin, actin- and phosphatidylinositol 4,5-bisphosphate-binding protein, involved in cytoskeleton organization, required for normal timing of actin polymerization in response to thermal stress; localizes to plasma membrane and cytosol |
| PGA1 | Essential component of GPI-mannosyltransferase II, responsible for second mannose addition to GPI precursors as a partner of Gpi18p; required for maturation of Gas1p and Pho8p; has synthetic genetic interactions with secretory pathway genes |
| PIB2 | Protein binding phosphatidylinositol 3-phosphate, involved in telomere-proximal repression of gene expression; similar to Fab1 and Vps27 |
| PPM1 | Carboxyl methyltransferase, methylates the C-terminus of the protein phosphatase 2A catalytic subunit (Pph21p or Pph22p), which is important for complex formation with regulatory subunits |
| PRO1 | γ -Glutamyl kinase, catalyzes the first step in proline biosynthesis |
| RAD51 | Strand exchange protein, forms a helical filament with DNA that searches for homology; involved in the recombinational repair of double-strand breaks in DNA during vegetative growth and meiosis; homolog of Dmc1p and bacterial RecA protein |

Table W3. (continued)

| ymbol | Description |
|----------------------|--|
| RAD55 | Protein that stimulates strand exchange by stabilizing the binding of Rad51p to single-stranded DNA; involved in the recombinational repair of double-strand breaks in DNA during vegetative growth and meiosis; forms heterodimer with Rad57p |
| RAX2 | N-glycosylated protein involved in the maintenance of bud site selection during bipolar budding; localization requires Rax1p; RAX2 mRNA stability is regulated by Mpt5p |
| RET2 | Delta subunit of the coatomer complex (COPI), which coats Golgi-derived transport vesicles; involved in retrograde transport between Golgi and ER |
| RIM2 | Mitochondrial pyrimidine nucleoside transporter; imports pyrimidine nucleoside triphosphates and exports pyrimidine nucleoside monophosphates; member of the mitochondrial carrier family |
| RML2 | Mitochondrial ribosomal protein of the large subunit, has similarity to <i>E. coli</i> L2 ribosomal protein; fat21 mutant allele causes inability to use oleate and may interfere with activity of the Adr1p transcription factor |
| RPA135 | RNA polymerase I subunit A135 |
| RPB4 | RNA polymerase II subunit B32; forms two subunit dissociable complex with Rpb7p; involved recruitment of 3'-end processing factors to transcribing RNA polymerase II complex and in export of mRNA to cytoplasm under stress conditions |
| RPD3 | Histore deacetylase; regulates transcription and silencing; plays a role in regulating Ty1 transposition |
| RPL13B | Protein component of the large (60S) ribosomal subunit, nearly identical to Rpl13Ap; not essential for viability; has similarity to rat L13 ribosomal protein |
| RPL1A | N-terminally acetylated protein component of the large (60S) ribosomal subunit, nearly identical to Rpl1Bp and has similarity to <i>E. coli</i> L1 and rat L10a ribosomal proteins; rpl1a rpl1b double null mutation is lethal /// N-terminally acetylated protein component of the large (60S) ribosomal subunit, nearly identical to Rpl1Ap and has similarity t <i>E. coli</i> L1 and rat L10a ribosomal proteins; rpl1a rpl1b double null mutation is lethal |
| RPL2B | Protein component of the large (60S) ribosomal subunit, identical to Rpl2Ap and has similarity to <i>E. coli</i> L2 and rat L8 ribosomal proteins; expression is upregulated at low temperatures |
| RPL35A | Protein component of the large (60S) ribosomal subunit, identical to Rpl35Bp and has similarity to rat L35 ribosomal protein /// Protein component of the large (60S) ribosomal subunit, identical to Rpl35Ap and has similarity to rat L35 ribosomal protein |
| RPL39 | Protein component of the large (60S) ribosomal subunit, has similarity to rat L39 ribosomal protein; required for ribosome biogenesis; loss of both Rpl31p and Rpl39p confers lethality; also exhibits genetic interactions with SIS1 and PAB1 |
| RPS14A | Ribosomal protein 59 of the small subunit, required for ribosome assembly and 20S pre-rRNA processing; mutations confer cryptopleurine resistance; nearly identical to Rps14Bp and similar to <i>E. coli</i> S11 and rat S14 ribosomal proteins |
| RPS1B | Ribosomal protein 10 (rp10) of the small (40S) subunit; nearly identical to Rps1Ap and has similarity to rat S3a ribosomal protein |
| RPS25A | Protein component of the small (40S) ribosomal subunit; nearly identical to Rps25Bp and has similarity to rat S25 ribosomal protein |
| RSB1 | Suppressor of sphingoid long chain base (LCB) sensitivity of an LCB-lyase mutation; putative integral membrane transporter or flippase that may transport LCBs from the cytoplasmic side toward the extracytoplasmic side of the membrane |
| SAC1 | Phosphatidylinositol phosphate (PtdInsP) phosphatase involved in hydrolysis of PtdIns[4]P; transmembrane protein localizes to ER and Golgi; involved in protein trafficking and processing, secretion, and cell wall maintenance |
| SEC59 | Dolichol kinase, catalyzes the terminal step in dolichyl monophosphate (Dol-P) biosynthesis; required for viability and for normal rates of lipid intermediate synthesis and protein N-glycosylation |
| SGO1 | Component of the spindle checkpoint, involved in sensing lack of tension on mitotic chromosomes; protects centromeric Rec8p at meiosis I; required for accurate chromosoma segregation at meiosis II and for mitotic chromosome stability |
| SGS1 | Nucleolar DNA helicase of the RecQ family involved in genome integrity maintenance; regulates chromosome synapsis and meiotic joint molecule/crossover formation; similar to human BLM and WRN proteins implicated in Bloom and Werner syndromes |
| SMC3 | Subunit of the multiprotein cohesin complex required for sister chromatid cohesion in mitotic cells; also required, with Rec8p, for cohesion and recombination during meiosis; phylogenetically conserved SMC chromosomal ATPase family member |
| SNF1 | AMP-activated serine/threonine protein kinase found in a complex containing Snf4p and members of the Sip1p/Sip2p/Gal83p family; required for transcription of glucose-repressed genes, thermotolerance, sporulation, and peroxisome biogenesis |
| SOK2 | Nuclear protein that plays a regulatory role in the cyclic AMP (cAMP)-dependent protein kinase (PKA) signal transduction pathway; negatively regulates pseudohyphal differentiation; homologous to several transcription factors |
| SOV1 | Mitochondrial protein of unknown function |
| SPO7 | Putative regulatory subunit of Nem1p-Spo7p phosphatase holoenzyme, regulates nuclear growth by controlling phospholipid biosynthesis, required for normal nuclear envelope morphology, premeiotic replication, and sporulation |
| SPT14 | UDP-GlcNAc-binding and catalytic subunit of the enzyme that mediates the first step in glycosylphosphatidylinositol (GPI) biosynthesis, mutations cause defects in transcription and in biogenesis of cell wall proteins |
| SSQ1 | Mitochondrial hsp70-type molecular chaperone, required for assembly of iron/sulfur clusters into proteins at a step after cluster synthesis, and for maturation of Yfh1p, which is a homolog of human frataxin implicated in Friedreich's ataxia |
| SUR4 | Elongase, involved in fatty acid and sphingolipid biosynthesis; synthesizes very long chain 20-26-carbon fatty acids from C18-CoA primers; involved in regulation of sphingolipid biosynthesis |
| TBF1 | Telobox-containing general regulatory factor; binds to TTAGGG repeats within subtelomeric anti-silencing regions (STARs) and possibly throughout the genome and mediates their insulating capacity by blocking silent chromatin propagation |
| TIP20 | Peripheral membrane protein required for fusion of COPI vesicles with the ER, prohibits back fusion of COPII vesicles with the ER, may act as a sensor for vesicles at the ER membrane; interacts with Sec20p |
| TMA23 | Nucleolar protein of unknown function implicated in ribosome biogenesis; TMA23 may be a fungal-specific gene as no homologs have been yet identified in higher eukaryotes |
| TRP3 | Bifunctional enzyme exhibiting both indole-3-glycerol-phosphate synthase and anthranilate synthase activities, forms multifunctional hetero-oligomeric anthranilate synthase:indole-3-glycerol phosphate synthase enzyme complex with Trp2p |
| VAC7 | Integral vacuolar membrane protein involved in vacuole inheritance and morphology; activates Fab1p kinase activity under basal conditions and also after hyperosmotic shock |
| VPS65 | Protein coding |
| VPS8 | Membrane-associated protein that interacts with Vps21p to facilitate soluble vacuolar protein localization; component of the CORVET complex; required for localization and trafficking of the CPY sorting receptor; contains RING finger motif |
| YIP1 | Integral membrane protein required for the biogenesis of ER-derived COPII transport vesicles; interacts with Yif1p and Yos1p; localizes to the Golgi, the ER, and COPII vesicl |
| YML012C-A | Hypothetical ORF |
| YMR290W-A | Protein required for cell viability |
| YOR199W | Hypothetical ORF |
| YPL080C | Hypothetical ORF |
| YIL014C-A | Putative protein of unknown function |
| YBR056W | Putative cytoplasmic protein of unknown function Putative protein of unknown function, identified by expression profiling and mass spectrometry. |
| YBR221W-A YDL118W | Putative protein of unknown function; identified by expression profiling and mass spectrometry Nonessential protein of unconfirmed function; mutants are defective in telomere maintenance, and are synthetically sick or lethal with α-synuclein |
| YDL118W YDL119C | Putative mitochondrial transport protein; GFP fusion protein is induced in response to the DNA-damaging agent MMS; the authentic, nontagged protein is detected in |
| I DLIIN | purified mitochondria |

| Table | W3. | (continued) |
|-------|-----|-------------|
| Table | W3. | (continued) |

| Symbol | Description |
|-----------|--|
| (B) | |
| ABD1 | Methyltransferase, catalyzes the transfer of a methyl group from S-adenosylmethionine to the GpppN terminus of capped mRNA |
| AKR1 | Palmitoyl transferase involved in protein palmitoylation; acts as a negative regulator of pheromone response pathway; required for endocytosis of pheromone receptors; |
| | involved in cell shape control; contains ankyrin repeats |
| ARP6 | Actin-related protein that binds nucleosomes; a component of the SWR1 complex, which exchanges histone variant H2AZ (Htz1p) for chromatin-bound histone H2A |
| BLM10 | Proteasome activator subunit; found in association with core particles, with and without the 19S regulatory particle; required for resistance to bleomycin, may be involved in protecting against oxidative damage; similar to mammalian PA200 |
| BUB3 | Kinetochore checkpoint WD40 repeat protein that localizes to kinetochores during prophase and metaphase, delays anaphase in the presence of unattached kinetochores; forms complexes with Mad1p-Bub1p and with Cdc20p, binds Mad2p and Mad3p |
| CIN1 | Tubulin folding factor D involved in β-tubulin (Tub2p) folding; isolated as mutant with increased chromosome loss and sensitivity to benomyl |
| CIN2 | GTPase-activating protein (GAP) for Cin4p; tubulin folding factor C involved in β-tubulin (Tub2p) folding; mutants display increased chromosome loss and benomyl sensitivity; deletion complemented by human GAP, retinitis pigmentosa 2 |
| CIN4 | GTP-binding protein involved in β-tubulin (Tub2p) folding; isolated as mutant with increased chromosome loss and sensitivity to benomyl; regulated by the GTPase-activating protein, Cin2p, the human retinitis pigmentosa 2 (RP2) homolog |
| CMC1 | Evolutionarily conserved copper-binding protein of the mitochondrial intermembrane space, may be involved in delivering copper from the matrix to the cytochrome <i>c</i> oxidase complex; contains a twin CX9C motif |
| DAL82 | Positive regulator of allophanate-inducible genes; binds a dodecanucleotide sequence upstream of all genes that are induced by allophanate; contains an UISALL DNA-binding, a transcriptional activation, and a coiled-coil domain |
| ECM23 | Nonessential protein of unconfirmed function; affects pre-rRNA processing, may act as a negative regulator of the transcription of genes involved in pseudohyphal growth; homologous to Srd1p |
| ERG2 | C-8 sterol isomerase, catalyzes the isomerization of the delta-8 double bond to the delta-7 position at an intermediate step in ergosterol biosynthesis |
| GIM3 | Subunit of the heterohexameric cochaperone prefoldin complex which binds specifically to cytosolic chaperonin and transfers target proteins to it |
| GIM4 | Subunit of the heterohexameric cochaperone prefoldin complex which binds specifically to cytosolic chaperonin and transfers target proteins to it |
| GND1 | 6-Phosphogluconate dehydrogenase (decarboxylating), catalyzes an NADPH regenerating reaction in the pentose phosphate pathway; required for growth on |
| GILDI | D-glucono-delta-lactone and adaptation to oxidative stress |
| MGR3 | Subunit of the mitochondrial (mt) i-AAA protease supercomplex, which degrades misfolded mitochondrial proteins; forms a subcomplex with Mgr1p that binds to substrates to facilitate proteolysis; required for growth of cells lacking mtDNA |
| MTQ2 | S-adenosylmethionine-dependent methyltransferase of the seven β -strand family; subunit of complex with Trm112p that methylates translation release factor Sup45p (eRF1) in the ternary complex eRF1-eRF3-GTP; similar to <i>E. coli</i> PrmC |
| PAC10 | Part of the heteromeric co-chaperone GimC/prefoldin complex, which promotes efficient protein folding |
| PAC2 | Microtubule effector required for tubulin heterodimer formation, binds α -tubulin, required for normal microtubule function, null mutant exhibits cold-sensitive |
| | microtubules and sensitivity to benomyl |
| PFD1 | Subunit of heterohexameric prefoldin, which binds cytosolic chaperonin and transfers target proteins to it; involved in the biogenesis of actin and of α - and γ -tubulin |
| RVS161 | Amphiphysin-like lipid raft protein; interacts with Rvs167p and regulates polarization of the actin cytoskeleton, endocytosis, cell polarity, cell fusion and viability following starvation or osmotic stress |
| SET6 | SET domain protein of unknown function; deletion heterozygote is sensitive to compounds that target ergosterol biosynthesis, may be involved in compound availability |
| STB5 | Transcription factor, involved in regulating multidrug resistance and oxidative stress response; forms a heterodimer with Pdr1p; contains a Zn(II)2Cys6 zinc finger domain that interacts with a pleiotropic drug resistance element <i>in vitro</i> |
| SWR1 | Swi2/Snf2-related ATPase that is the structural component of the SWR1 complex, which exchanges histone variant H2AZ (Htz1p) for chromatin-bound histone H2A |
| TIF1 | translation initiation factor eIF4E, 4F complex subunit (PMID 8955119) |
| TUB3 | Alpha-tubulin; associates with β -tubulin (Tub2p) to form tubulin dimer, which polymerizes to form microtubules; expressed at lower level than Tub1p |
| UGO1 | Protein of unknown function; outer membrane component of the mitochondrial fusion machinery; Ugo1p bind directly to Fzo1p and Mgm1p and thereby link these two GTPases during mitochondrial fusion |
| VPS53 | Component of the GARP (Golgi-associated retrograde protein) complex, Vps51p-Vps52p-Vps53p-Vps54p, which is required for the recycling of proteins from endosomes to the late Golgi; required for vacuolar protein sorting |
| VPS71 | Nucleosome-binding component of the SWR1 complex, which exchanges histone variant H2AZ (Htz1p) for chromatin-bound histone H2A; required for vacuolar protein sorting |
| VPS72 | Htz1p-binding component of the SWR1 complex, which exchanges histone variant H2AZ (Htz1p) for chromatin-bound histone H2A; required for vacuolar protein sorting |
| YAF9 | Subunit of both the NuA4 histone H4 acetyltransferase complex and the SWR1 complex, may function to antagonize silencing near telomeres; interacts directly with Swc4p, has homology to human leukemogenic protein AF9, contains a YEATS domain |
| YKE2 | Subunit of the heterohexameric Gim/prefoldin protein complex involved in the folding of α -tubulin, β -tubulin, and actin |
| YLR269C | Hypothetical ORF |
| YML094C-A | Hypothetical ORF |

Table W4. C1311 IC₅₀-Correlated Microarray Probes.

| Probe Set* | Rho^{\dagger} | Symbol | Gene Title | Entrez Gene ID | Cytoband |
|--------------------------------------|-----------------|------------------|--|----------------|----------------------|
| 00661_at | 0.4553 | CTSA | cathepsin A | 5476 | 20q13.1 |
| 00677_at | 0.4239 | PTTG1IP | pituitary tumor-transforming 1 interacting protein | 754 | 21q22.3 |
| 00696_s_at | 0.5067 | GSN | gelsolin (amyloidosis, Finnish type) | 2934 | 9q33 |
| 00827_at | 0.4218 | PLOD1 | procollagen-lysine 1, 2-oxoglutarate 5-dioxygenase 1 | 5351 | 1p36.22 |
| 01021_s_at | 0.4644 | DSTN | destrin (actin depolymerizing factor) | 11034 | 20p12.1 |
| 01022_s_at | 0.434 | DSTN | destrin (actin depolymerizing factor) | 11034 | 20p12.1 |
| 01032_at | 0.4325 | BLCAP | bladder cancer associated protein | 10904 | 20q11.2-q12 |
| 01038_s_at | -0.4044 | ANP32A | acidic (leucine-rich) nuclear phosphoprotein 32 family, member A | 8125 | 15q22.3-q23 |
| 01051_at | -0.4105 | ANP32A | acidic (leucine-rich) nuclear phosphoprotein 32 family, member A | 8125 | 15q22.3-q23 |
| 01148_s_at | 0.4094 | TIMP3 | TIMP metallopeptidase inhibitor 3 | 7078 | 22q12.1-q13.2 22q12. |
| 01204_s_at | 0.4182 | RRBP1 | ribosome binding protein 1 homolog 180 kDa (dog) | 6238 | 20p12 |
| 01305_x_at | -0.4189 | ANP32B | acidic (leucine-rich) nuclear phosphoprotein 32 family, member B | 10541 | 9q22.32 |
| 01481_s_at | 0.405 | PYGB | phosphorylase, glycogen; brain | 5834 | 20p11.2-p11.1 |
| 01500_s_at | 0.4222 | PPP1R11 | protein phosphatase 1, regulatory (inhibitor) subunit 11 | 6992 | 6p21.3 |
| 01525_at | 0.475 | APOD | apolipoprotein D | 347 | 3q26.2-qter |
| 01618_x_at | 0.4073 | GPAA1 | glycosylphosphatidylinositol anchor attachment protein 1 homolog (yeast) | 8733 | 8q24.3 |
| 01629_s_at | -0.4001 | ACP1 | acid phosphatase 1, soluble | 52 | 2p25 |
| 01029_s_at 01720_s_at | -0.4154 | LAPTM5 | lysosomal protein transmembrane 5 | 7805 | 1p34 |
| | | | | | |
| 01775_s_at | 0.4114 | KIAA0494 | KIAA0494 | 9813 | 1pter-p22.1 |
| 01987_at | -0.4256 | MED13 | mediator complex subunit 13 | 9969 | 17q22-q23 |
| 02027_at | 0.4175 | TMEM184B | transmembrane protein 184B | 25829 | 22q12 |
| 02058_s_at | 0.4398 | KPNA1 | karyopherin α 1 (importin α 5) | 3836 | 3q21 |
| 02066_at | 0.4728 | PPFIA1 | PTPRF interacting protein, α 1 | 8500 | 11q13.3 |
| 02219_at | 0.4223 | SLC6A8 | solute carrier family 6, member 8 | 6535 | Xq28 |
| 02421_at | 0.4328 | IGSF3 | immunoglobulin superfamily, member 3 | 3321 | 1p13 |
| 02478_at | 0.4103 | TRIB2 | tribbles homolog 2 (Drosophila) | 28951 | 2p24.3 |
| 02479_s_at | 0.5655 | TRIB2 | tribbles homolog 2 (Drosophila) | 28951 | 2p24.3 |
| 02503_s_at | -0.4017 | KIAA0101 | KIAA0101 | 9768 | 15q22.31 |
| 02609_at | 0.4414 | EPS8 | epidermal growth factor receptor pathway substrate 8 | 2059 | 12q13 |
| 02629_at | -0.457 | APPBP2 | amyloid β -precursor protein (cytoplasmic tail) binding protein 2 | 10513 | 17q21-q23 |
| 02818_s_at | 0.4258 | TCEB3 | transcription elongation factor B (SIII), polypeptide 3 (110 kDa, elongin A) | 6924 | 1p36.1 |
|)2821_s_at | 0.4163 | LPP | LIM domain containing preferred translocation partner in lipoma | 4026 | |
| | | | | | 3q28 |
| 02840_at | -0.5074 | TAF15 | TAF15 RNA polymerase II, TATA box binding protein (TBP)-associated factor | 8148 | 17q11.1-q11.2 |
| 02853_s_at | 0.4478 | RYK | RYK receptor-like tyrosine kinase | 6259 | 3q22 |
| 02894_at | 0.4577 | EPHB4 | EPH receptor B4 | 2050 | 7q22 |
| 02943_s_at | 0.4066 | NAGA | N-acetylgalactosaminidase, α- | 4668 | 22q13-qter 22q11 |
| 02946_s_at | 0.4029 | BTBD3 | BTB (POZ) domain containing 3 | 22903 | 20p12.2 |
| 03054_s_at | 0.5192 | TCTA | T-cell leukemia translocation altered gene | 6988 | 3p21 |
| 03137_at | -0.4221 | WTAP | Wilms tumor 1 associated protein | 9589 | 6q25-q27 |
| 03304_at | 0.4496 | BAMBI | BMP and activin membrane-bound inhibitor homolog (Xenopus laevis) | 25805 | 10p12.3-p11.2 |
| 03455_s_at | 0.4052 | SAT1 | spermidine/spermine N1-acetyltransferase 1 | 6303 | Xp22.1 |
| 03488_at | 0.4243 | LPHN1 | latrophilin 1 | 22859 | 19p13.2 |
| 03657_s_at | 0.4297 | CTSF | cathepsin F | 8722 | 11q13 |
| 03832_at | -0.4357 | SNRPF | small nuclear ribonucleoprotein polypeptide F | 6636 | 12q23.1 |
| 04209_at | 0.4157 | PCYT1A | phosphate cytidylyltransferase 1, choline, α | 5130 | 3q29 |
| 04233_s_at | 0.4287 | СНКА | choline kinase α | 1119 | 11q13.2 |
| 04266_s_at | 0.4633 | СНКА | choline kinase a | 1119 | 11q13.2 |
| 04200_s_at 04301_at | | | | | |
| | -0.4881 | KBTBD11 | kelch repeat and BTB (POZ) domain containing 11 | 9920 | 8p23.3 |
| 04501_at | 0.4265 | NOV | nephroblastoma overexpressed gene | 4856 | 8q24.1 |
| 04528_s_at | -0.4544 | NAP1L1 | nucleosome assembly protein 1-like 1 | 4673 | 12q21.2 |
| 04542_at | 0.4563 | ST6GALNAC2 | ST6 -N-acetylgalactosaminide α-2,6-sialyltransferase 2 | 10610 | 17q25.1 |
| 04566_at | -0.4076 | PPM1D | protein phosphatase 1D magnesium–dependent, delta isoform | 8493 | 17q23.2 |
| 04626_s_at | 0.4075 | ITGB3 | integrin, β_3 (platelet glycoprotein IIIa, antigen CD61) | 3690 | 17q21.32 |
| 04638_at | 0.4635 | ACP5 | acid phosphatase 5, tartrate resistant | 54 | 19p13.3-p13.2 |
| 04653_at | 0.4107 | TFAP2A | transcription factor AP-2 α | 7020 | 6p24 |
|)4654_s_at | 0.4418 | TFAP2A | transcription factor AP-2 α | 7020 | 6p24 |
| 04783_at | 0.4152 | MLF1 | myeloid leukemia factor 1 | 4291 | 3q25.1 |
| 04789_at | -0.5508 | FMNL1 | formin-like 1 | 752 | 17q21 |
| 04803_s_at | -0.4276 | RRAD | Ras-related associated with diabetes | 6236 | 16q22 |
| 05209_at | -0.4004 | ACVR1B | activin A receptor, type IB | 91 | 12q13 |
| 05334_at | 0.4318 | S100A1 | S100 calcium binding protein A1 | 6271 | 1q21 |
| 05376_at | 0.4913 | INPP4B | inositol polyphosphate-4-phosphatase, type II, 105 kDa | 8821 | 4q31.21 |
|)5441_at | 0.4227 | OCEL1 | occludin/ELL domain containing 1 | 79629 | 19p13.11 |
|)5749_at | 0.4227 | CYP1A1 | cytochrome P450, family 1, subfamily A, polypeptide 1 | 1543 | 15q24.1 |
| | | | | | - |
| 06066_s_at | -0.4726 | RAD51C | RAD51 homolog C (S. cerevisiae) | 5889 | 17q22-q23 |
| 06077_at | 0.4308 | KEL | Kell blood group, metalloendopeptidase | 3792 | 7q33 |
| 06305_s_at | -0.4283 | C8A | complement component 8, α polypeptide | 731 | 1p32 |
| 06523_at | 0.4377 | CYTH3 | cytohesin 3 | 9265 | 7p22.1 |
| 06775_at | 0.4011 | CUBN | cubilin (intrinsic factor-cobalamin receptor) | 8029 | 10p12.31 |
| 06994_at | 0.4623 | CST4 | cystatin S | 1472 | 20p11.21 |
| | 0.4992 | CDKN2A | cyclin-dependent kinase inhibitor 2A (melanoma, p16, inhibits CDK4) | 1029 | 9p21 |
| 07039_at | | | | | * |
| | | MFN1 | mitofusin 1 | 55669 | 3q26.33 |
| 07039_at 07098_s_at 07714_s_at | 0.419 0.4095 | MFN1 SERPINH1 | mitofusin 1 serpin peptidase inhibitor, clade H, member 1 | 55669 871 | 3q26.33 11q13.5 |

 Table W4. (continued)

| Probe Set* | Rho^{\dagger} | Symbol | Gene Title | Entrez Gene ID | Cytoband |
|----------------------------|-----------------|----------|---|----------------|---------------------------|
| 207913_at | 0.426 | CYP2F1 | cytochrome P450, family 2, subfamily F, polypeptide 1 | 1572 | 19q13.2 |
| 207938_at | 0.4719 | PI15 | peptidase inhibitor 15 | 51050 | 8q21.11 |
| 207992_s_at | -0.407 | AMPD3 | adenosine monophosphate deaminase (isoform E) | 272 | 11p15 |
| 208291_s_at | -0.4216 | TH | tyrosine hydroxylase | 7054 | 11p15.5 |
| 208356_x_at | -0.4035 | CSH1 | chorionic somatomammotropin hormone 1 (placental lactogen) | 1442 | 17q24.2 |
| 208754_s_at | -0.455 | NAP1L1 | nucleosome assembly protein 1–like 1 | 4673 | 12q21.2 |
| 208776_at | -0.4355 | PSMD11 | proteasome (prosome, macropain) 26S subunit, non-ATPase, 11 | 5717 | 17q11.2 |
| 208949_s_at | 0.5056 | LGALS3 | lectin, galactoside-binding, soluble, 3 | 3958 | 14q21-q22 |
| 208978_at | 0.4147 | CRIP2 | cysteine-rich protein 2 | 1397 | 14q32.3 |
| 208978_at 209054_s_at | -0.4028 | WHSC1 | Wolf-Hirschhorn syndrome candidate 1 | 7468 | 4p16.3 |
| | -0.4028 | MRC2 | mannose receptor, C type 2 | 9902 | * |
| 209280_at | | | | | 17q23.2 |
| 209361_s_at | 0.4418 | PCBP4 | poly(rC) binding protein 4 | 57060 | 3p21 |
| 209399_at | 0.4037 | HLCS | holocarboxylase synthetase | 3141 | 21q22.1 21q22.13 |
| 209484_s_at | -0.4026 | NSL1 | NSL1, MIND kinetochore complex component, homolog (S. cerevisiae) | 25936 | 1q41 |
| 209485_s_at | 0.4055 | OSBPL1A | oxysterol binding protein-like 1A | 114876 | 18q11.1 |
| 209598_at | -0.4092 | PNMA2 | paraneoplastic antigen MA2 | 10687 | 8p21.2 |
| 209736_at | 0.4124 | SOX13 | SRY (sex determining region Y)-box 13 | 9580 | 1q32 |
| 209744_x_at | 0.4511 | ITCH | itchy E3 ubiquitin protein ligase homolog (mouse) | 83737 | 20q11.22-q11.23 |
| 209849_s_at | -0.4522 | RAD51C | RAD51 homolog C (S. cerevisiae) | 5889 | 17q22-q23 |
| 209945_s_at | 0.4391 | GSK3B | glycogen synthase kinase 3β | 2932 | 3q13.3 |
| 210083_at | 0.4181 | SEMA7A | semaphorin 7A, GPI membrane anchor | 8482 | 15q22.3-q23 |
| 210005_at 210194_at | -0.5138 | PLA2R1 | phospholipase A2 receptor 1, 180 kDa | 22925 | 2q23-q24 |
| 2101)4_at 210235_s_at | 0.4315 | PPFIA1 | PTPRF interacting protein, α 1 | 8500 | 11q13.3 |
| | | | Wilms tumor 1 associated protein | | * |
| 210285_x_at | -0.4267 | WTAP | 1 | 9589 | 6q25-q27 |
| 210740_s_at | 0.411 | ITPK1 | inositol 1,3,4-triphosphate 5/6 kinase | 3705 | 14q31 |
| 210854_x_at | 0.4757 | SLC6A8 | solute carrier family 6, member 8 | 6535 | Xq28 |
| 210980_s_at | 0.4375 | ASAH1 | N-acylsphingosine amidohydrolase 1 | 427 | 8p22-p21.3 |
| 211381_x_at | 0.403 | SPAG11B | sperm associated antigen 11B | 10407 | 8p23-p22 |
| 211870_s_at | 0.4171 | PCDHA3 | protocadherin α 3 | 56145 | 5q31 |
| 211883_x_at* | 0.4335 | CEACAM1 | carcinoembryonic antigen-related cell adhesion molecule 1 | 634 | 19q13.2 |
| 211988_at | -0.4108 | SMARCE1 | SWI/SNF related, matrix associated, subfamily e, member 1 | 6605 | 17q21.2 |
| 212007_at | -0.4351 | UBXN4 | UBX domain protein 4 | 23190 | 2q21.3 |
| 212056_at | -0.4018 | KIAA0182 | KIAA0182 | 23199 | 16q24.1 |
| 212090_at 212086_x_at | 0.4143 | LMNA | lamin A/C | 4000 | 1q21.2-q21.3 |
| | 0.4145 | LMNA | lamin A/C | 4000 | |
| 212089_at | | | | | 1q21.2-q21.3 |
| 212226_s_at | 0.4283 | PPAP2B | phosphatidic acid phosphatase type 2B | 8613 | 1pter-p22.1 |
| 212230_at | 0.4355 | PPAP2B | phosphatidic acid phosphatase type 2B | 8613 | 1pter-p22.1 |
| 212252_at | -0.4583 | CAMKK2 | calcium/calmodulin–dependent protein kinase kinase 2, β | 10645 | 12q24.2 |
| 212338_at | 0.41 | MYO1D | myosin ID | 4642 | 17q11-q12 |
| 212375_at | -0.4327 | EP400 | E1A binding protein p400 | 57634 | 12q24.33 |
| 212631_at | 0.4084 | STX7 | syntaxin 7 | 8417 | 6q23.1 |
| 212747_at | 0.4647 | ANKS1A | ankyrin repeat and sterile α motif domain containing 1A | 23294 | 6p21.31 |
| 212807_s_at | 0.5102 | SORT1 | sortilin 1 | 6272 | 1p21.3-p13.1 1p21.3-p13.1 |
| 212876_at | 0.4171 | B4GALT4 | UDP-Gal:βGlcNAc β 1,4- galactosyltransferase, polypeptide 4 | 8702 | 3q13.3 |
| 212957_s_at | 0.4444 | LOC92249 | hypothetical LOC92249 | 92249 | Xq11.1 |
| 213236_at | 0.4565 | SASH1 | SAM and SH3 domain containing 1 | 23328 | 6q24.3 |
| 213242_x_at | 0.4868 | KIAA0284 | KIAA0284 | 283638 | 14q32.33 |
| | | | - | | ÷ |
| 213293_s_at | -0.4534 | TRIM22 | tripartite motif-containing 22 | 10346 | 11p15 |
| 213294_at | -0.4017 | | | - 271(1 | |
| 213310_at | 0.4496 | EIF2C2 | Eukaryotic translation initiation factor 2C, 2 | 27161 | 8q24 |
| 213343_s_at | 0.604 | GDPD5 | glycerophosphodiester phosphodiesterase domain containing 5 | 81544 | 11q13.4-q13.5 |
| 213472_at | -0.4171 | HNRNPH1 | heterogeneous nuclear ribonucleoprotein H1 (H) | 3187 | 5q35.3 |
| 213575_at | -0.4166 | TRA2A | transformer 2 α homolog (<i>Drosophila</i>) | 29896 | 7p15.3 |
| 213649_at | -0.4247 | SFRS7 | splicing factor, arginine/serine-rich 7, 35 kDa | 6432 | 2p22.1 |
| 213672_at | -0.4654 | MARS | methionyl-tRNA synthetase | 4141 | 12q13.2 |
| 213702_x_at | 0.4707 | ASAH1 | N-acylsphingosine amidohydrolase 1 | 427 | 8p22-p21.3 |
| 213843_x_at | 0.4967 | SLC6A8 | solute carrier family 6, member 8 | 6535 | Xq28 |
| 213864_s_at | -0.4207 | NAP1L1 | nucleosome assembly protein 1–like 1 | 4673 | 12q21.2 |
| 213902_at | 0.4116 | ASAH1 | N-acylsphingosine amidohydrolase 1 | 4075 | 8p22-p21.3 |
| 213902_at 213921_at | | SST | somatostatin | 6750 | |
| | 0.4172 | | somatostatin family with sequence similarity 169, member A | 26049 | 3q28 |
| 213954_at | -0.4715 | FAM169A | | | 5q13.3 |
| 214152_at | 0.4033 | CCPG1 | cell cycle progression 1 | 9236 | 15q21.1 |
| 214172_x_at | 0.455 | RYK | RYK receptor-like tyrosine kinase | 6259 | 3q22 |
| 214180_at | 0.4349 | MAN1C1 | mannosidase, α, class 1C, member 1 | 57134 | 1p35 |
| 214213_x_at | 0.428 | LMNA | Lamin A/C | 4000 | 1q21.2-q21.3 |
| 214280_x_at | -0.4075 | HNRNPA1 | heterogeneous nuclear ribonucleoprotein A1 | 3178 | 12q13.1 |
| 214584_x_at | 0.444 | ACACB | acetyl-Coenzyme A carboxylase β | 32 | 12q24.11 |
| 214635_at | 0.4365 | CLDN9 | claudin 9 | 9080 | 16p13.3 |
| 214812_s_at | -0.5214 | MOBKL1B | MOB1, Mps One Binder kinase activator–like 1B (yeast) | 55233 | 2p13.1 |
| 214012_3_at 214971_s_at | 0.4022 | ST6GAL1 | ST6 β -galactosamide α -2,6-sialyltranferase 1 | 6480 | 3q27-q28 |
| | 0.4022 | FNBP1L | formin binding protein 1-like | 54874 | |
| 215017_s_at | | | 0.1 | | 1p22.1 |
| 215096_s_at | -0.4088 | ESD | esterase D/formylglutathione hydrolase | 2098 | 13q14.1-q14.2 |
| 215381_at | 0.4365 | FRAP1 | FK506 binding protein 12-rapamycin associated protein 1 | 2475 | 1p36.2 |
| 215495_s_at | 0.4115 | SAMD4A | sterile α motif domain containing 4A | 23034 | 14q22.2 |

Table W4. (continued)

| Probe Set* | Rho^{\dagger} | Symbol | Gene Title | Entrez Gene ID | Cytoband |
|---------------------------|-----------------|----------------------|--|----------------|-------------------------|
| 215535_s_at | 0.4043 | AGPAT1 | 1-acylglycerol-3-phosphate O-acyltransferase 1 | 10554 | 6p21.3 |
| 215611_at | -0.4135 | TCF12 | transcription factor 12 | 6938 | 15q21 |
| 215693_x_at | 0.4599 | DDX27 | DEAD (Asp-Glu-Ala-Asp) box polypeptide 27 | 55661 | 20q13.13 |
| 215731_s_at* | -0.4896 | MPHOSPH9 | M-phase phosphoprotein 9 | 10198 | 12q24.31 |
| 215749_s_at | 0.4258 | GORASP1 | golgi reassembly stacking protein 1, 65 kDa | 64689 | 3p22-p21.33 |
| 215812_s_at | 0.5162 | LOC653562 | similar to solute carrier family 6 member 8 | | 16p11.2 /// Xq28 |
| 216032_s_at | 0.4316 | ERGIC3 | ERGIC and golgi 3 | 51614 | 20pter-q12 |
| 216060_s_at | 0.4403 | DAAM1 | dishevelled associated activator of morphogenesis 1 | 23002 | 14q23.1 |
| 216086_at | 0.4003 | SV2C | synaptic vesicle glycoprotein 2C | 22987 | 5q13.3 |
| 216560_x_at | 0.4343 | IGL@ | immunoglobulin lambda locus | 3535 | 22q11.1-q11.2 |
| 216629_at | 0.4066 | SRRM2 | Serine/arginine repetitive matrix 2 | 23524 | 16p13.3 |
| 216751_at | -0.4111 | _ | _ | _ | _ |
| 216835_s_at | -0.4124 | DOK1 | docking protein 1, 62 kDa (downstream of tyrosine kinase 1) | 1796 | 2p13 |
| 216874 at | 0.489 | DKFZp68601327 | Hypothetical gene supported by BC043549; BX648102 | 401014 | 2q22.3 |
| 216976_s_at | 0.4007 | RYK | RYK receptor-like tyrosine kinase | 6259 | 3q22 |
| 217036_at | 0.4367 | LOC100293679 | hypothetical protein LOC100293679 | 100293679 | |
| 217094_s_at | 0.4157 | ITCH | itchy E3 ubiquitin protein ligase homolog (mouse) | 83737 | 20q11.22-q11.23 |
| 217573_at | 0.4175 | GRIN2C | glutamate receptor, ionotropic, N–methyl D–aspartate 2C | 2905 | 17q25 |
| 217606_at | 0.4886 | 0/01/20 | giutamate receptor, ionotropic, ru-methyr D-aspartate 20 | 2909 | 1/425 |
| | | TMEM144 | | 5521/ | |
| 217613_at | -0.4542 | TMEM144 TMPIM1 | transmembrane protein 144 | 55314 | 4q32.1 |
| 217730_at* | 0.4432 | TMBIM1 | transmembrane BAX inhibitor motif containing 1 | 64114 | 2p24.3-p24.1 |
| 217749_at | 0.4832 | COPG | coatomer protein complex, subunit γ | 22820 | 3q21.3 |
| 217925_s_at | 0.4097 | C6orf106 | chromosome 6 open reading frame 106 | 64771 | 6p21.31 |
| 218099_at | 0.4599 | TEX2 | testis expressed 2 | 55852 | 17q23.3 |
| 218299_at | 0.4424 | C11orf24 | chromosome 11 open reading frame 24 | 53838 | 11q13 |
| 218509_at | 0.5167 | LPPR2 | lipid phosphate phosphatase-related protein type 2 | 64748 | 19p13.2 |
| 218670_at | -0.4554 | PUS1 | pseudouridylate synthase 1 | 80324 | 12q24.33 |
| 218779_x_at | 0.4243 | EPS8L1 | EPS8-like 1 | 54869 | 19q13.42 |
| 218936_s_at | -0.4272 | CCDC59 | coiled-coil domain containing 59 | 29080 | 12q21.31 |
| 218963_s_at | 0.4383 | KRT23 | keratin 23 (histone deacetylase-inducible) | 25984 | 17q21.2 |
| 218970_s_at | -0.4909 | CUTC | cutC copper transporter homolog (E. coli) | 51076 | 10q24.2 |
| 219011_at | 0.4364 | PLEKHA4 | pleckstrin homology domain containing, family A member 4 | 57664 | 19q13.33 |
| 219046_s_at | 0.4165 | PKNOX2 | PBX/knotted 1 homeobox 2 | 63876 | |
| 219108_x_at | 0.4345 | DDX27 /// SS18 | DEAD (Asp-Glu-Ala-Asp) box polypeptide 27 | _ | 18q11.2 /// 20q13.13 |
| 219112_at | -0.4589 | RAPGEF6 | Rap guanine nucleotide exchange factor (GEF) 6 | 51735 | 5q31.1 |
| 219143_s_at | 0.4134 | RPP25 | ribonuclease P/MRP 25 kDa subunit | 54913 | 15q24.2 |
| 219278_at | 0.4464 | MAP3K6 | mitogen-activated protein kinase kinase kinase 6 | 9064 | 1p36.11 |
| 219394_at | -0.4245 | PGS1 | phosphatidylglycerophosphate synthase 1 | 9489 | 17q25.3 |
| | | PXMP4 | | 11264 | |
| 219428_s_at | 0.4054 | | peroxisomal membrane protein 4, 24 kDa | | 20q11.22 |
| 219450_at | 0.4348 | C4orf19 | chromosome 4 open reading frame 19 | 55286 | 4p14 |
| 219569_s_at | -0.4059 | TMEM22 | transmembrane protein 22 | 80723 | 3q22.3 |
| 219710_at | 0.4466 | SH3TC2 | SH3 domain and tetratricopeptide repeats 2 | 79628 | 5q32 |
| 219873_at | 0.4197 | COLEC11 | collectin subfamily member 11 | 78989 | 2p25.3 |
| 220038_at | 0.4149 | C8orf44 /// SGK3 | chromosome 8 open reading frame 44 | — | 8q12.3-q13.1 /// 8q13.1 |
| 220499_at | 0.443 | FNDC8 | fibronectin type III domain containing 8 | 54752 | 17q12 |
| 220559_at | 0.4341 | EN1 | engrailed homeobox 1 | 2019 | 2q13-q21 |
| 220948_s_at | 0.447 | ATP1A1 | ATPase, Na ⁺ /K ⁺ transporting, α 1 polypeptide | 476 | 1p21 |
| 220999_s_at | -0.4167 | CYFIP2 | cytoplasmic FMR1 interacting protein 2 | 26999 | 5q33.3 |
| 221017_s_at | 0.409 | LRRC3 | leucine rich repeat containing 3 | 81543 | 21q22.3 |
| 221215_s_at | 0.4981 | RIPK4 | receptor-interacting serine-threonine kinase 4 | 54101 | 21q22.3 |
| 221410_x_at | 0.4631 | PCDHB3 | protocadherin β3 | 56132 | 5q31 |
| 221489_s_at | 0.4378 | SPRY4 | sprouty homolog 4 (<i>Drosophila</i>) | 81848 | 5q31.3 |
| 221616_s_at | -0.4113 | TAF9B | TAF9B RNA polymerase II | 51616 | Xq13.1-q21.1 |
| 221681_s_at | -0.4101 | DSPP | dentin sialophosphoprotein | 1834 | 4q21.3 |
| 221683_s_at | -0.4697 | CEP290 | centrosomal protein 290 kDa | 80184 | 12q21.32 |
| 221738_at | 0.4105 | KIAA1219 | KIAA1219 | 57148 | 20q11.23 |
| 221756_at 221816_s_at | -0.4902 | PHF11 | PHD finger protein 11 | 51131 | 13q14.2 |
| 221810_s_at | -0.4578 | RAB35 | RAB35, member RAS oncogene family | 11021 | 12q24.31 |
| 221819_at 221821_s_at* | -0.4378 | C12orf41 | chromosome 12 open reading frame 41 | 54934 | - |
| | | 5 | 1 0 | | 12q13.11 |
| 221900_at | -0.4483 | COL8A2 HNIPNIP4 1 | collagen, type VIII, α 2 heterogeneous pucker ribonucleoprotein A1 | 1296 | 1p34.2 |
| 221919_at | -0.4026 | HNRNPA1 | heterogeneous nuclear ribonucleoprotein A1 | 3178 | 12q13.1 |
| 221965_at* | -0.5905 | MPHOSPH9 | M-phase phosphoprotein 9 | 10198 | 12q24.31 |
| 221986_s_at | 0.4164 | KLHL24 | kelch-like 24 (Drosophila) | 54800 | 3q27.1 |
| 222347_at | 0.4183 | LOC644450 | hypothetical protein LOC644450 | 644450 | 1q12 |
| 32502_at | 0.4446 | GDPD5 | glycerophosphodiester phosphodiesterase domain containing 5 | 81544 | 11q13.4-q13.5 |
| 36888_at | -0.4388 | HAUS5 | HAUS augmin–like complex, subunit 5 | 23354 | 19q13.12 |
| 38918_at | 0.4097 | SOX13 | SRY (sex determining region Y)-box 13 | 9580 | 1q32 |
| 41644_at | 0.4485 | SASH1 | SAM and SH3 domain containing 1 | 23328 | 6q24.3 |
| 52164_at | 0.4047 | C11orf24 | chromosome 11 open reading frame 24 | 53838 | 11q13 |
| 52169_at | -0.4345 | STRADA | STE20-related kinase adaptor α | 92335 | 17q23.3 |
| | | | 1 | | * |

*Probe set designation from the Affymetrix HG-U133A platform. The five probes exhibiting concordant expression across all three data sets are specifically asterisked. [†]Correlation coefficient (ρ) for Spearman rank–based correlation of indicated probe expression in the NCI-60 cell line data set, *GSE5720*, to the C1311 IC₅₀ values for each of the sixty cell lines. A cutoff of 0.4 was used for biomarker discovery.