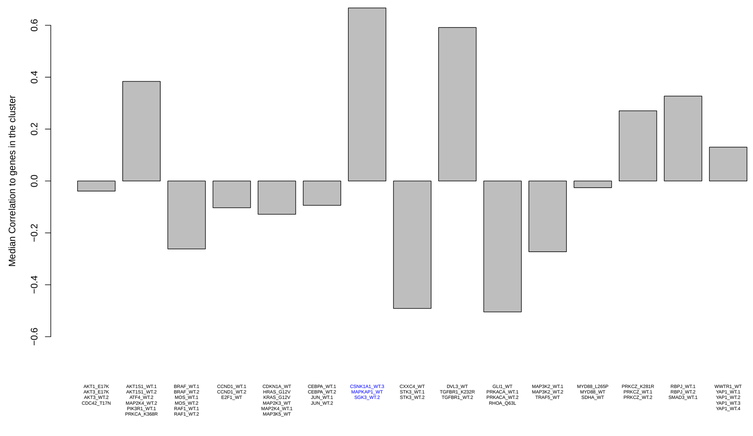
Genes in the cluster along with the pathways as annotated by experts

	Expert Annotation	
Treatment	Pathway	Regulation Type
MAPKAP1_WT	Canonical TOR	Activator
SGK3_WT.2	Canonical TOR	Activator
CSNK1A1_WT.3	Canonical WNT	Inhibitor

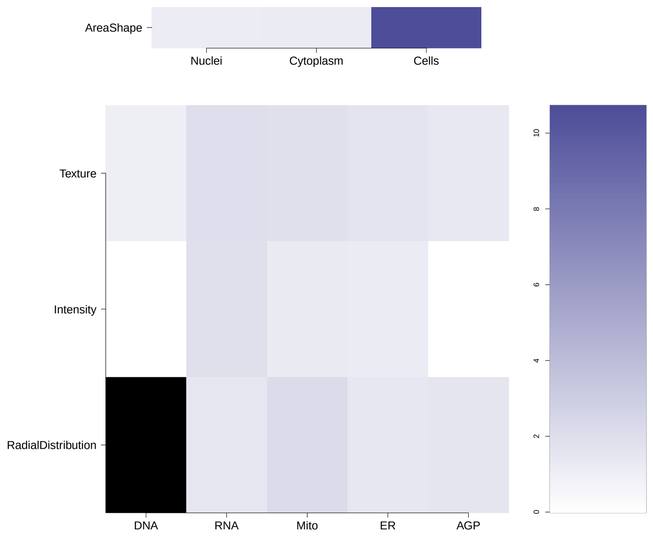
How similar is this cluster to the other clusters?



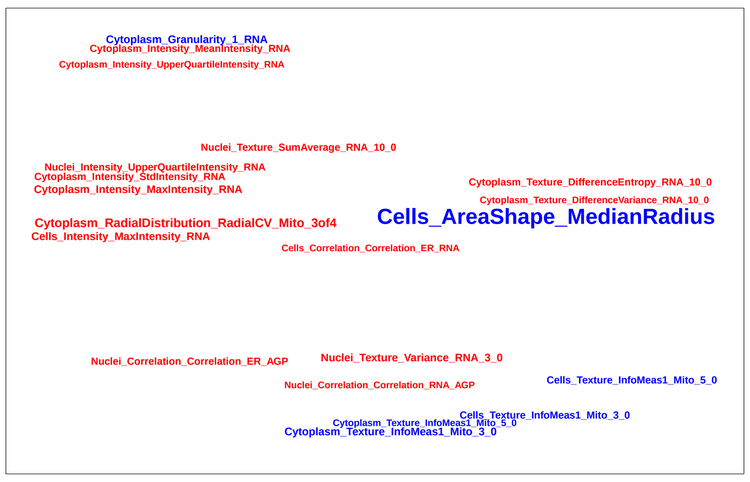
Top 5 genes negatively correlated to the cluster

	Expert Annotation			
Treatment	Pathway	Regulation Type	Mean Correlation	Standard Deviation
PRKACA_WT.2	Canonical PKA	Activator	-0.60	0.02
PRKACA_WT.1	Canonical PKA	Activator	-0.51	0.05
CXXC4_WT	WNT	Inhibitor	-0.50	0.12
STK3_WT.2	Canonical Hippo	Activator	-0.49	0.26
PIK3CB_WT.2	Canonical PI3K/AKT	Activator	-0.46	0.09

What groups of morphological features are distinguishing in the cluster relative to the untreated samples? (maximum of absolute m-score for the features belonging to the same category; m-score defined as median of a feature z-score across genes in the cluster) Black means no feature is available in the category



Which individual morphological features are distinguishing in the cluster relative to the untreated samples? Blue/Red means the feature has a positive/negative z-score. Size is proportional to the z-score value.



How strongly are genes within the cluster correlated?

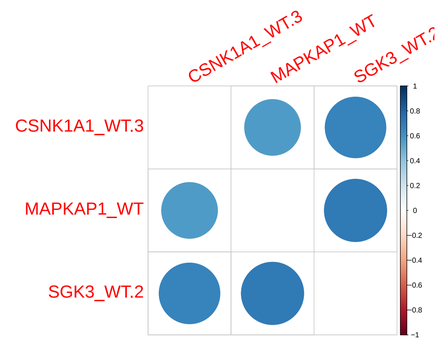
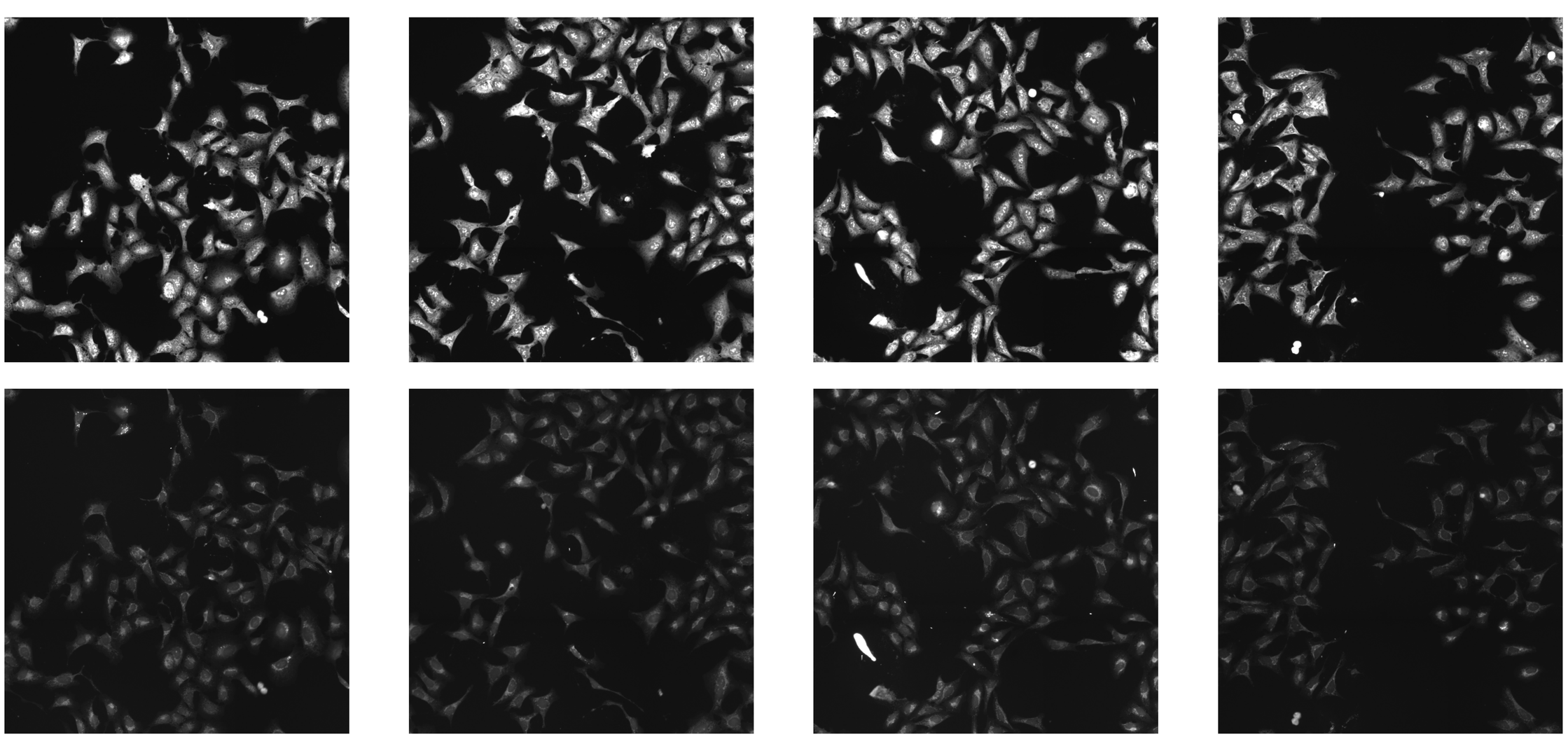
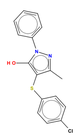
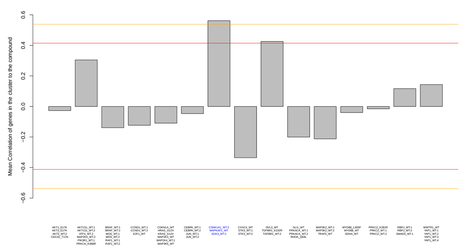
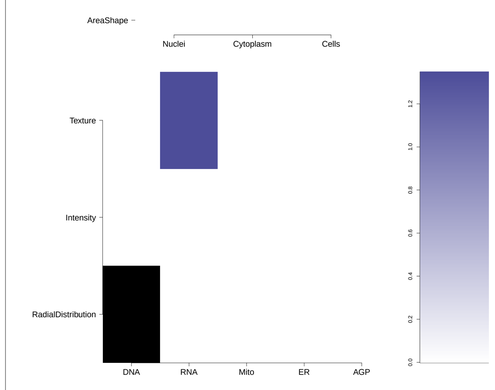
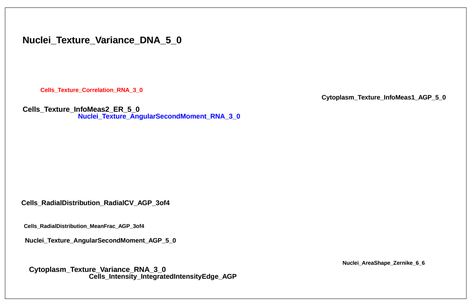
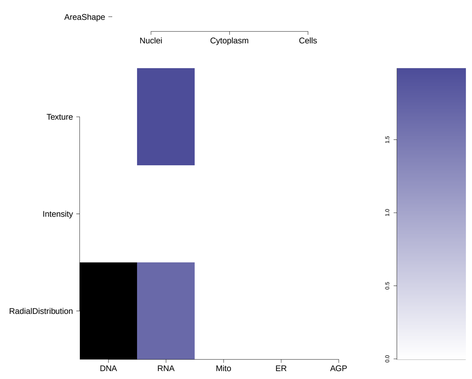
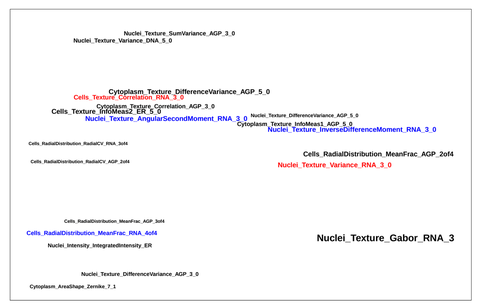
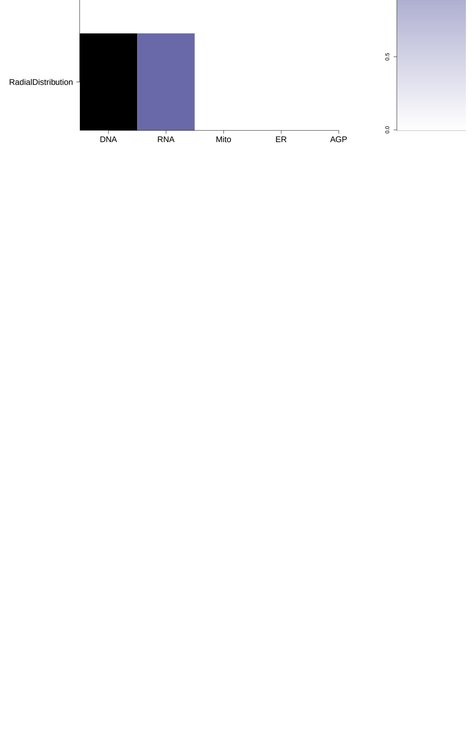
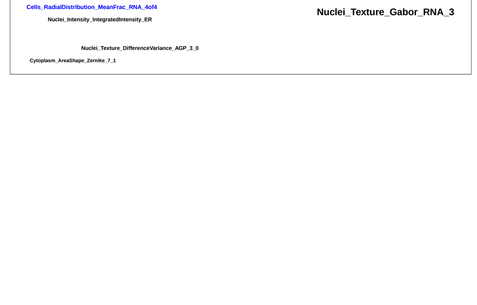
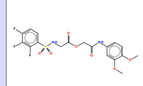
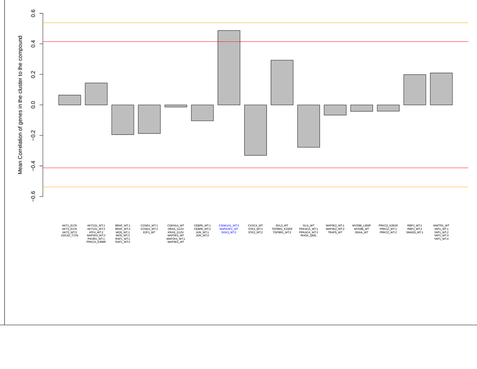
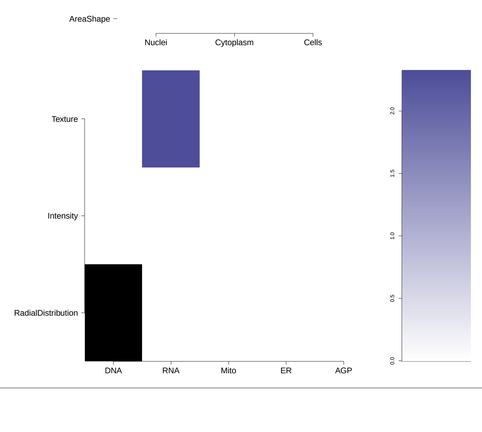
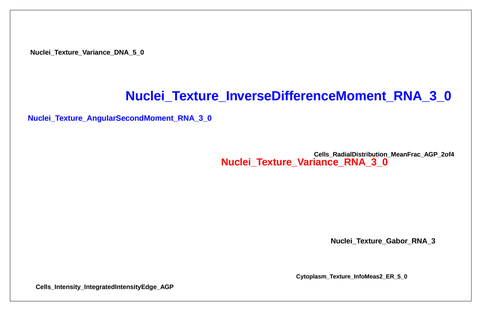
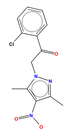
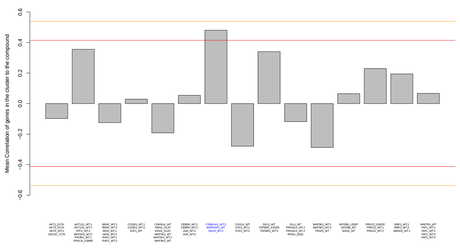
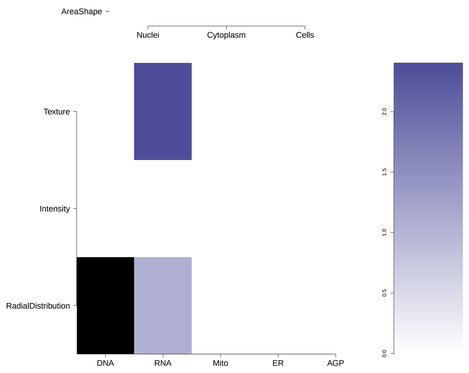
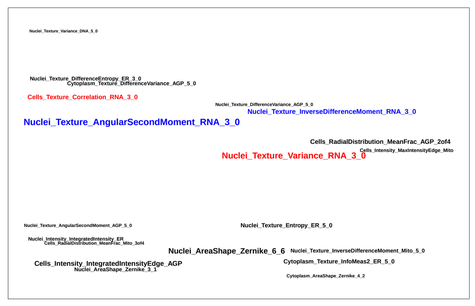
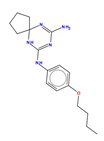
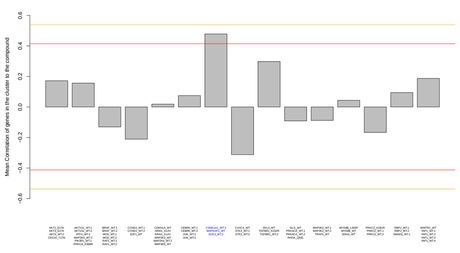
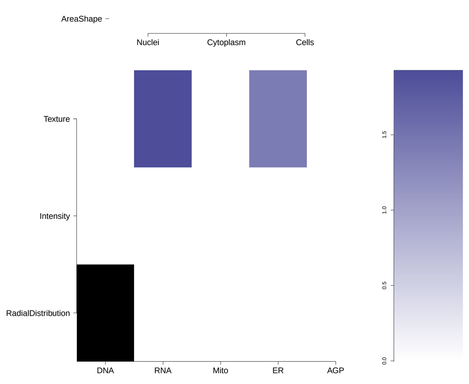
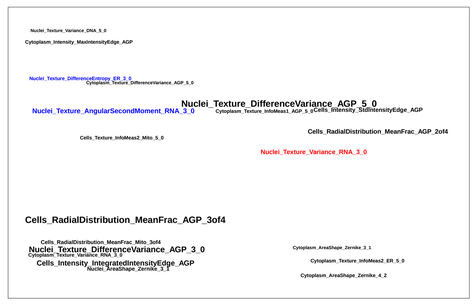
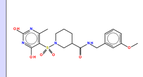
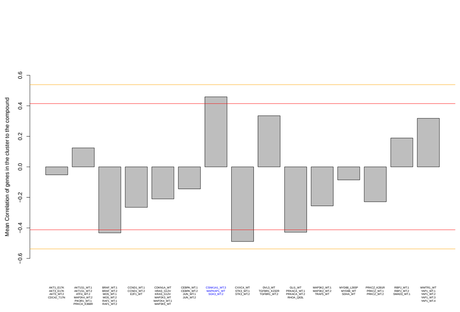
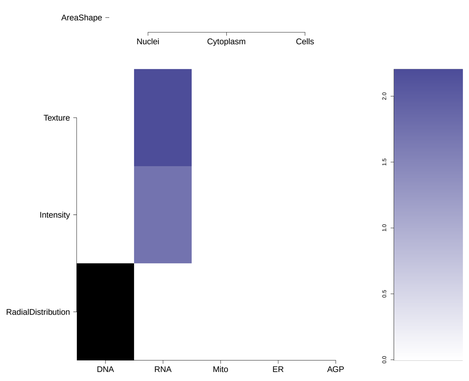
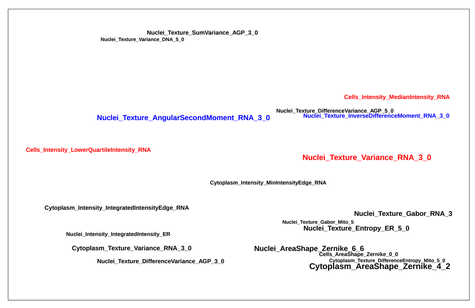
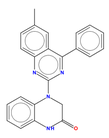
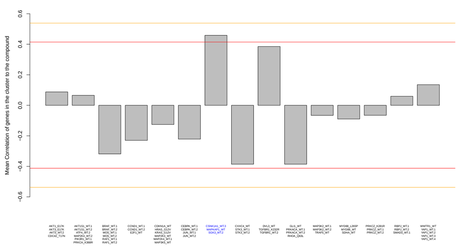
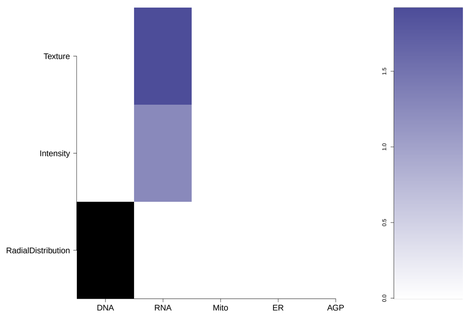
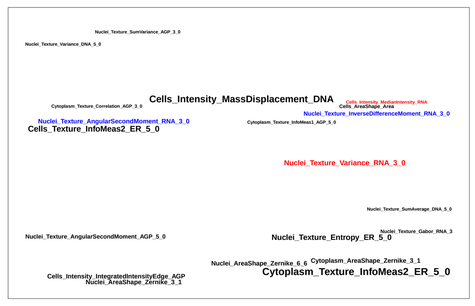


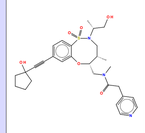
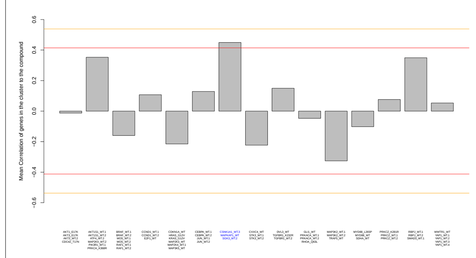
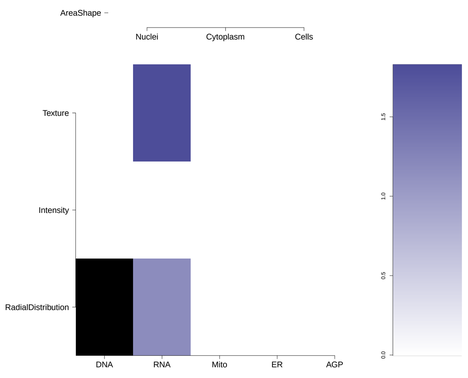
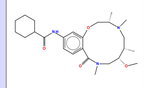
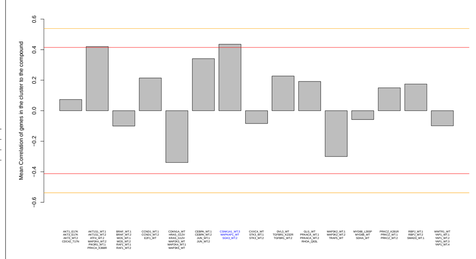
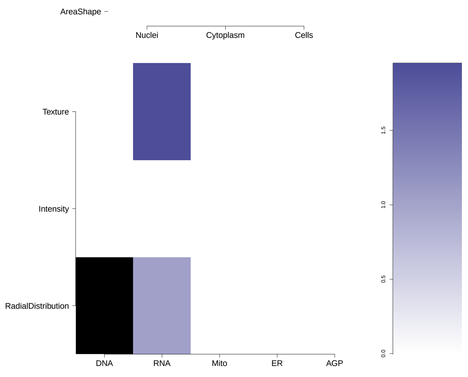
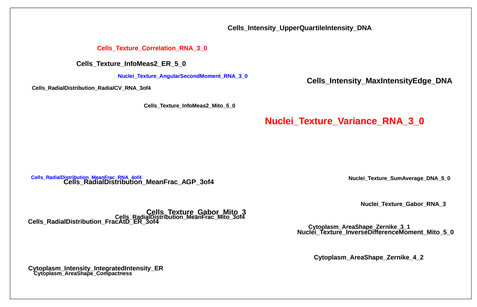
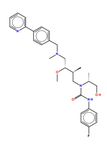
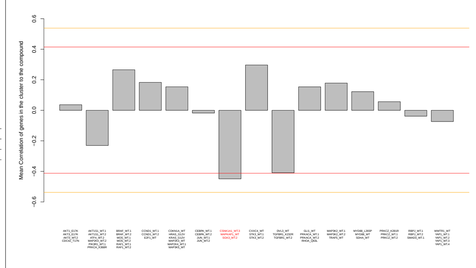
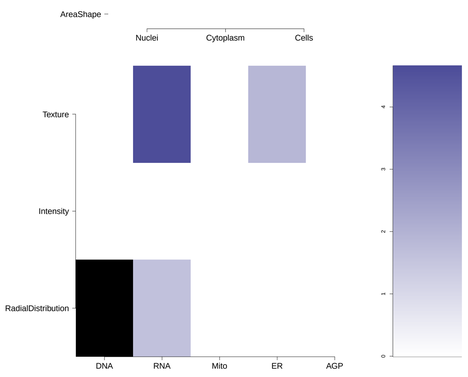
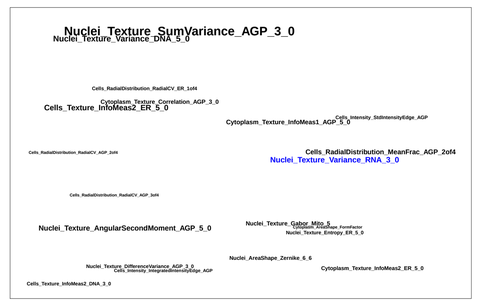
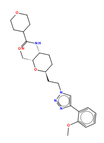
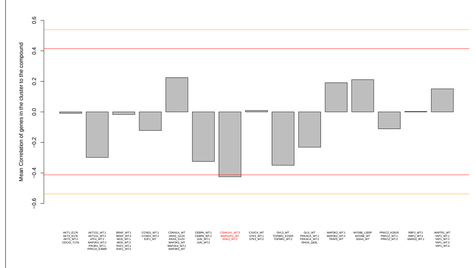
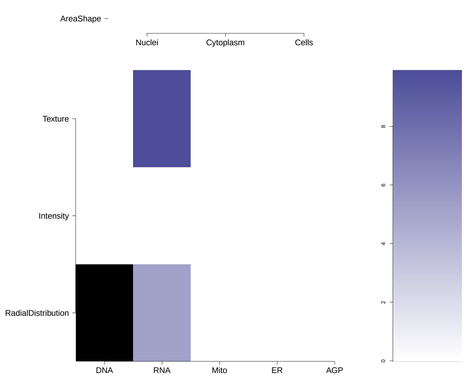
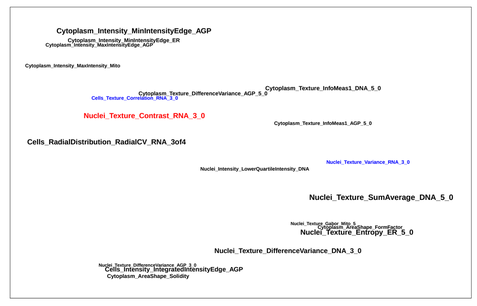
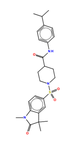
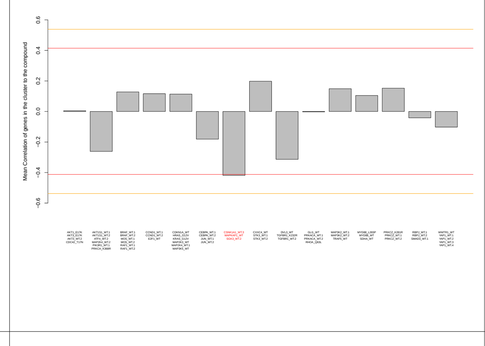
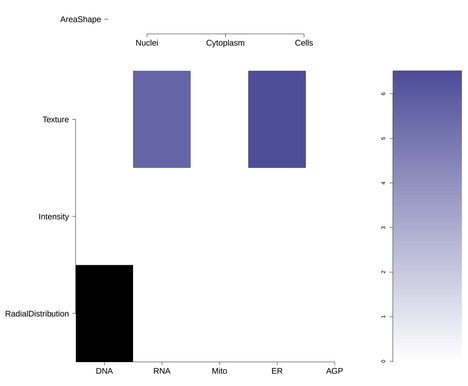
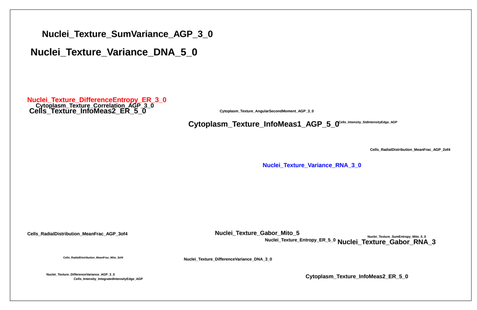
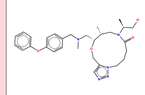
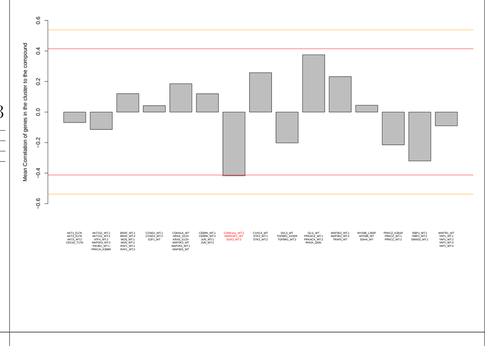
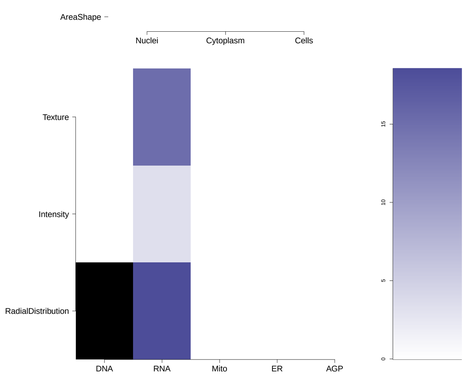
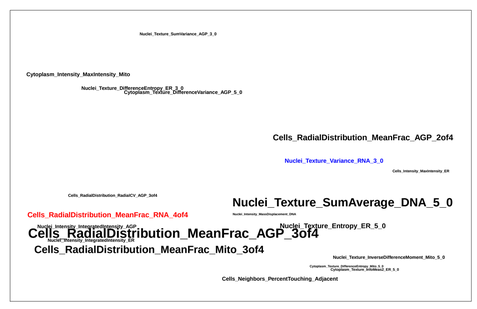
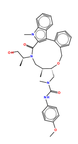
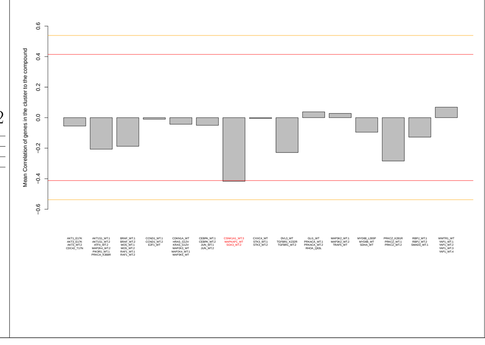
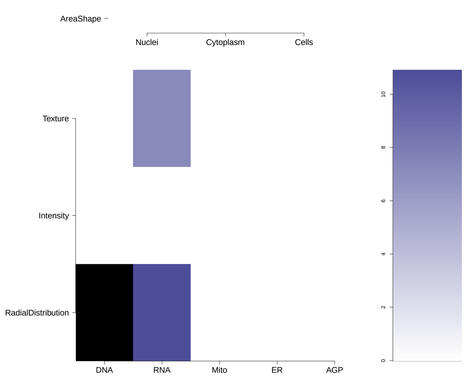
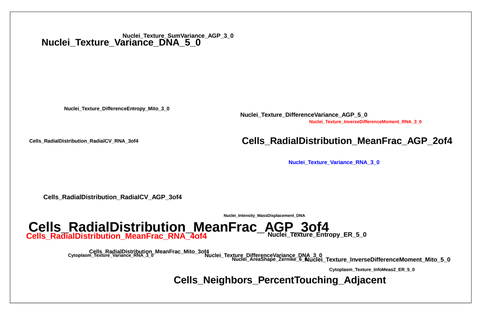
Plate : 41744 - Genes in the Cluster (Channels are sorted based on their dominance in the grid plot)



Compound IDs and common names (where available); blue/red colored box means the matching compound is positively/negatively correlated with the cluster	Chemical structure	Mean pairwise replicates correlation of the compound signature (95th DMSO replicate correlation is 0.52)	Mean ± standard deviation correlation between compound and each gene in cluster; Tables contain data for individual genes	Mean compound rank when scored against genes in cluster using L1000 profiling ± standard deviation; Tables contain data for individual genes	How similar is the compound signature to the gene clusters in this experiment? (Yellow and red lines correspond to top/bottom 1st and 5th percentile DMSO correlation to all the genes)	Common distinguishing feature categories in the compound and genes in the cluster relative to the untreated samples	Distinguishing individual features for the compound relative to untreated samples. Black means a mismatch; i.e. active (= high z-score in magnitude) in the compound, and either inactive (= small z-score in magnitude) or oppositely active in the gene cluster	Number of PubChem assays in which the compound was tested; assays in which the compound was active are itemized
BRD-K05950645-001-07-2 MLS000536739 SMR000155669 AC1LGWR5 BDBM48497 HMS1485K04 HMS2379O21 IDI1 022358 F1386-0259 T0500-8534 PubChem CID : 828338		NA (in 1 replicates)	0.56 ± 0.07 Treatment | Score CSNK1A1.WT.3 | 0.50 MAPKAP1.WT | 0.55 SGK3.WT.2 | 0.64	NA				Total number of assays tested in: 701. Active in the following assays: • HTS for Estrogen Receptor-beta Coactivator Binding inhibitors (AID 633) • Screening for Modulators of Post-Golgi Transport, Control Strain (AID 738) • CYP2C9 Assay (AID 777) • CYP2C19 Assay (AID 778) • Inhibitors of Plasmodium falciparum M17-Family Leucine Aminopeptidase (M17LAP) (AID 1619) • Fluorescence Cell-Free Homogenous Primary HTS to Identify Inhibitors of RecA Intein Splicing Activity (AID 2221) • Fluorescence Cell-Free Homogeneous Counter Screen to Identify Inhibitors of GFP Chromophore Formation (AID 434968) • Fluorescence Cell-Free Homogeneous Dose Retest to Identify Inhibitors of RecA-Intein Splicing Activity (AID 435010) • Fluorescence Cell-Free Homogeneous Secondary Screen to Identify Inhibitors of DnaB-Intein Splicing Activity (AID 449749) • Fluorescence Cell-Free Homogeneous Secondary Screen to Identify Non-Covalent Inhibitors of RecA-Intein Splicing Activity (AID 449750)

BRD-K61415887-001-06-6 MLS000702412 SMR000224826 ZINC00271948 AC1LBONR BDBM72363 HMS2527J06 ZINC271948 HE199368 LS-192575 PubChem CID : 561606		NA (in 1 replicates)	0.53 ± 0.14 Treatment | Score CSNK1A1.WT.3 | 0.45 MAPKAP1.WT | 0.45 SGK3.WT.2 | 0.69	NA				Total number of assays tested in: 652. Active in the following assays: • High Throughput Screen to Identify Compounds that Suppress the Growth of Human Colon Tumor Cells Lacking Oncogenic Beta Catenin Expression (AID 818) • High Throughput Screen to Identify Compounds that Suppress the Growth of Cells with a Deletion of the PTEN Tumor Suppressor (AID 827) • qHTS Assay for Inhibitors of Aldehyde Dehydrogenase 1 (ALDH1A1) (AID 1030) • Leishmania major promastigote HTS (AID 1063) • HCS to Identify Inhibitors of Dynein Mediated Cargo Transport on Microtubules. (AID 1381) • qHTS Multiplex Assay to Identify Dual Action Probes in a Cell Model of Huntington: Aggregate Formation (GFP) (AID 1688) • qHTS for inhibitors of ROR gamma transcriptional activity (AID 2551) • Luminescence Cell-Based Dose Retest to Identify Potentiators of Heat Shock Factor 1 (HSF1) (AID 435004) • HCS to Identify Inhibitors of Dynein Mediated Cargo Transport on Microtubules: Confirmation Assay (AID 463116) • Concentration-Response Confirmation Assays for HCS to Identify Inhibitors of Dynein Mediated Cargo Transport on Microtubules (AID 463136) • HTS-Luminescent assay for inhibitors of ALR by detection of hydrogen peroxide production Measured in Biochemical System Using Plate Reader - 2036-02_Inhibitor_SinglePoint_HTS (AID 485317) • uHTS for identification of Inhibitors of Mdm2/MdmX interaction in luminescent format. (AID 485346) • qHTS screen for small molecules that inhibit ELG1-dependent DNA repair in human embryonic kidney (HEK293T) cells expressing luciferase-tagged ELG1 (AID 504467) • Confirmation screen for delayed death inhibitors of the malarial parasite plastid, 96 hour incubation (AID 504848) • Confirmation screen for delayed death inhibitors of the malarial parasite plastid, 48 hour incubation (AID 504850) • qHTS for inhibitors of binding or entry into cells for Marburg Virus (AID 540276) • qHTS Assay for Inhibitors of Mammalian Selenoprotein Thioredoxin Reductase 1 (TrxR1): qHTS (AID 588453) • qHTS for Inhibitors of TGF-b: Cytotox Counterscreen (AID 588856) • A quantitative high throughput screen for small molecules that induce DNA re-replication in MCF 10a normal breast cells. (AID 624296) • qHTS for Inhibitors of ATXN expression (AID 651635) • Luminescence Cell-Based Primary HTS to identify inhibitors of the oncoprotein EWS/Fli transcriptional activity Measured in Cell-Based System Using Plate Reader - 7014-01_Inhibitor_SinglePoint_HTS_Activity (AID 651661) • qHTS of TDP-43 Inhibitors (AID 652104) • HTS for PAX8 inhibitors using PAX8 luciferase reporter gene assay in RMG-I cells Measured in Cell-Based System Using Plate Reader - 7054-01_Inhibitor_SinglePoint_HTS_Activity (AID 652154) • Luminescence Cell-Based Primary HTS to identify inhibitors of the oncoprotein EWS/Fli transcriptional activity Measured in Cell-Based System Using Plate Reader - 7014-01_Inhibitor_Dose_CherryPick_Activity (AID 686920) • qHTS for Inhibitors of human tyrosyl-DNA phosphodiesterase 1 (TDP1): qHTS in cells in absence of CPT (AID 686978) • qHTS for Inhibitors of human tyrosyl-DNA phosphodiesterase 1 (TDP1): qHTS in cells in presence of CPT (AID 686979) • Luminescence cell-based Retest at Dose assay to determine EWS/Fli1 dependent TC71 mammalian cell cytotoxity Measured in Cell-Based System Using Plate Reader - 7014-04_Inhibitor_Dose_CherryPick_Activity (AID 720570) • Luminescence cell-based Retest at Dose assay to determine EWS/Fli1 dependent A673 mammalian cell cytotoxity Measured in Cell-Based System Using Plate Reader - 7014-03_Inhibitor_Dose_CherryPick_Activity (AID 720587) • HEK293 Cytotoxicity Assay Measured in Cell-Based System Using Plate Reader - 7071-01_Inhibitor_Dose_CherryPick_Activity_Set3 (AID 720588) • qHTS for Inhibitors of Inflammasome Signaling: IL-1-beta AlphaLISA Primary Screen (AID 743279) • High Throughput Screening for Foot and Mouth Disease Virus Antivirals (AID 1159524)
BRD-K34029905-001-05-9 SMR000000619 MLS000075639 AC1LDAT0 BDBM37870 HMS2312J13 ZINC1349156 ZINC01349156 ASN 09122461 PubChem CID : 645145		NA (in 1 replicates)	0.50 ± 0.10 Treatment | Score CSNK1A1.WT.3 | 0.46 MAPKAP1.WT | 0.42 SGK3.WT.2 | 0.61	NA				Total number of assays tested in: 791. Active in the following assays: • Primary biochemical high-throughput screening assay for inhibitors of protein kinase A (PKA) activity (AID 524) • Primary biochemical high-throughput screening assay for inhibitors of Rho kinase 2 (Rhok2) (AID 604) • CYP2C9 Assay (AID 777) • CYP2C19 Assay (AID 778) • qHTS Assay for Activators of Human Muscle isoform 2 Pyruvate Kinase (AID 1631) • qHTS Assay for Inhibitors of JMJD2A-Tudor Domain (AID 504339) • qHTS for Inhibitors of PLK1-PDB (polo-like kinase 1 - polo-box domain): Primary Screen (AID 720504) • QFRET-based biochemical primary high throughput screening assay to identify exosite inhibitors of ADAM17. (AID 720648)
BRD-K21575567-001-05-5 T5287677 SMR000243883 ZINC03378621 AC1M8XY1 MLS000707809 MLS003913042 HMS2575N20 ZINC3378621 PubChem CID : 2496700		NA (in 1 replicates)	0.49 ± 0.12 Treatment | Score CSNK1A1.WT.3 | 0.56 MAPKAP1.WT | 0.34 SGK3.WT.2 | 0.56	NA				Total number of assays tested in: 634. Active in the following assays: • Multiplex HTS Assay for Inhibitors of MEK Kinase PB1 Domains, specifically MEK5 MEK Kinase3 Wildtype (AID 1529)

BRD-K81339550-001-06-0 T0511-3166 ZINC03223178 AC1M64FM MLS001006094 HMS2706H03 ZINC3223178 SMR000349131 5354-48-3 PubChem CID : 2341607		NA (in 1 replicates)	0.48 ± 0.07 Treatment | Score CSNK1A1.WT.3 | 0.48 MAPKAP1.WT | 0.41 SGK3.WT.2 | 0.55	NA				Total number of assays tested in: 626. Active in the following assays: • Luminescence-based primary biochemical high throughput screening assay to identify inhibitors of the Heat Shock Protein 90 (HSP90) (AID 1789) • MLPCN Alpha-Synuclein 5'UTR - 5'-UTR binding - activators (AID 1814) • Luminescence-based confirmation biochemical high throughput screening assay for inhibitors of the Heat Shock Protein 90 (HSP90) (AID 1846) • Luminescence-based counterscreen assay for HSP90 inhibitors: biochemical high throughput screening assay to identify inhibitors of native luciferase. (AID 1847) • Aqueous Solubility from MLSMR Stock Solutions (AID 1996) • Luminescence Cell-Based Dose Response HTS to Identify Activators of 5'UTR Stem-Loop Driven Prion Protein mRNA Translation in H4 Neuroglioblastoma Cells (AID 1999) • Luminescence Cell-Based Dose Response HTS to Identify Activators of Luciferase Translation or Activity in H4 Neuroglioblastoma Cells (AID 2002) • Luminescence Cell-Based Dose Confimation HTS to Identify Activators of 5'UTR Stem-Loop Driven Alpha-Synuclein mRNA Translation in H4 Neuroglioblastoma Cells (AID 2003) • Cycloheximide Counterscreen for Small Molecule Inhibitors of Shiga Toxin (AID 2314) • A qHTS for Small Molecule Inhibitors of Shiga Toxin (AID 2315) • qHTS Assay for Rab9 Promoter Activators (AID 485297) • qHTS screen for small molecules that induce genotoxicity in human embryonic kidney (HEK293T) cells expressing luciferase-tagged ELG1 (AID 504466) • qHTS profiling assay for firefly luciferase inhibitor/activator using purifed enzyme and Km concentrations of substrates (counterscreen for miR-21 project) (AID 588342) • qHTS Assay to Identify Small Molecule Activators of BRCA1 Expression (AID 624202)
BRD-K58393684-001-05-7 MLS000062598 GNF-Pf-2876 SMR000071624 AC1M2NL4 Ambcb6067889 Ambcb7126688 CHEMBL601578 BDBM42950 HMS2383K20 ZINC06492245 ZINC87711567 PubChem CID : 2174924		NA (in 1 replicates)	0.48 ± 0.12 Treatment | Score CSNK1A1.WT.3 | 0.34 MAPKAP1.WT | 0.53 SGK3.WT.2 | 0.56	NA				Total number of assays tested in: 810. Active in the following assays: • HTS for BAP1 Enzyme inhibitors (AID 436) • Discovery of novel allosteric modulators of the M1 muscarinic receptor: Antagonist Primary Screen (AID 628) • Discovery of novel allosteric modulators of the M1 muscarinic receptor: Antagonist Confirmation Screen (AID 677) • Primary biochemical High Throughput Screening assay for agonists of the steroid receptor coactivator 2 (SRC-2) recruitment by the peroxisome proliferator-activated receptor gamma (PPARgamma) (AID 1032) • Measurement of TR-FRET detection format artefact in the screen for agonists of steroid receptor coactivator 2 (SRC-2) recruitment by the peroxisome proliferator-activated receptor gamma (PPARgamma) (AID 1049) • A small molecule screen for inhibitors of the PhoP regulon in Salmonella typhi (AID 1850) • A screen for inhibitors of the PhoP regulon in Salmonella Typhi using a modified counterscreen (AID 1985) • A cytotoxicity screen of small molecule inhibitors of the PhoP regulon in Salmonella typhi identified in the primary screen (AID 2252) • A counter screen for small molecule screen for inhibitors of the PhoP regulon in Salmonella typhi (AID 2384) • NOVARTIS: Inhibition of Plasmodium falciparum 3D7 (drug-susceptible) proliferation in erythrocyte-based infection assay (AID 449703) • NOVARTIS: Inhibition of Plasmodium falciparum W2 (drug-resistant) proliferation in erythrocyte-based infection assay (AID 449704) • Phenotypic HTS multiplex for antifungal efflux pump inhibitors (AID 485275) • Primary qHTS for delayed death inhibitors of the malarial parasite plastid, 48 hour incubation (AID 504832) • Confirmation screen for delayed death inhibitors of the malarial parasite plastid, 96 hour incubation (AID 504848) • Confirmation screen for delayed death inhibitors of the malarial parasite plastid, 48 hour incubation (AID 504850) • qHTS for Inhibitors of human tyrosyl-DNA phosphodiesterase 1 (TDP1): qHTS in cells in absence of CPT (AID 686978) • qHTS for Inhibitors of human tyrosyl-DNA phosphodiesterase 1 (TDP1): qHTS in cells in presence of CPT (AID 686979) • Confirmed allosteric antagonists of M1 Muscarinic receptor (AID 1053187)
BRD-A86682819-001-05-9 SMR000132149 MLS000521741 MLS002586576 HMS2504L07 PubChem CID : 9550295		NA (in 1 replicates)	0.46 ± 0.07 Treatment | Score CSNK1A1.WT.3 | 0.40 MAPKAP1.WT | 0.54 SGK3.WT.2 | 0.44	NA				Total number of assays tested in: 671.
BRD-K26720351-001-04-5 F0324-0011 SMR000235950 AC1N2WPT MLS000722326 HMS594A03 HMS2562D13 ZINC754028 ZINC00754028 EU-0037277 PubChem CID : 4078248		NA (in 1 replicates)	0.46 ± 0.12 Treatment | Score CSNK1A1.WT.3 | 0.56 MAPKAP1.WT | 0.33 SGK3.WT.2 | 0.48	NA				Total number of assays tested in: 585. Active in the following assays: • High Throughput Screen to Identify Compounds that Suppress the Growth of Human Colon Tumor Cells Lacking Oncogenic Beta Catenin Expression (AID 818) • High Throughput Screen to Identify Compounds that Suppress the Growth of Cells with a Deletion of the PTEN Tumor Suppressor (AID 827) • uHTS of Mcl-1/Bid interaction inhibitors (AID 1021) • High Throughput Screen to Identify Compounds that Suppress the Growth of Human Colon Tumor Cells Lacking Oncogenic Beta Catenin Expression - Dose Response (AID 1045) • High Throughput Screen to Identify Compounds that Suppress the Growth of Cells with a Deletion of the PTEN Tumor Suppressor - Dose Response (AID 1047) • Primary Cell-based High Throughput Screening Assay for Inhibitors of Wee1 Degradation (AID 1321) • HTS for small molecule inhibitors of CHOP to regulate the unfolded protein response to ER stress (AID 2732) • Primary qHTS for delayed death inhibitors of the malarial parasite plastid, 96 hour incubation (AID 504834) • HTS to identify compounds that promote myeloid differentiation with MLPCN compound set (AID 624256) • A quantitative high throughput screen for small molecules that induce DNA re-replication in MCF 10a normal breast cells. (AID 624296) • A quantitative high throughput screen for small molecules that induce DNA re-replication in SW480 colon adenocarcinoma cells. (AID 624297) • qHTS for induction of synthetic lethality in tumor cells producing 2HG: qHTS for the HT-1080-NT fibrosarcoma cell line (AID 686970) • qHTS for induction of synthetic lethality in tumor cells producing 2HG: qHTS for the HT-1080-IDH1KD cell line (AID 686971)

BRD-K02630067-001-01-5 PubChem CID : 54619891		0.66 (in 4 replicates)	0.45 ± 0.07 Treatment | Score CSNK1A1.WT.3 | 0.42 MAPKAP1.WT | 0.40 SGK3.WT.2 | 0.53	NA				Total number of assays tested in: 37.
BRD-K11696795-001-01-4 PubChem CID : 54634120		0.65 (in 3 replicates)	0.44 ± 0.14 Treatment | Score CSNK1A1.WT.3 | 0.33 MAPKAP1.WT | 0.38 SGK3.WT.2 | 0.60	0.446 ± 0.275 Treatment | Score CSNK1A1.WT.3 | 0.762 MAPKAP1.WT | 0.321 SGK3.WT.2 | 0.256				Total number of assays tested in: 37.
BRD-K62820230-001-01-1 PubChem CID : 54649258		0.62 (in 2 replicates)	-0.45 $\pm$ 0.11 Treatment | Score CSNK1A1.WT.3 | -0.32 MAPKAP1.WT | -0.50 SGK3.WT.2 | -0.53	0.937 $\pm$ 0.077 Treatment | Score CSNK1A1.WT.3 | 0.848 MAPKAP1.WT | 0.992 SGK3.WT.2 | 0.971				Total number of assays tested in: 38.
BRD-K09155468-001-01-1 PubChem CID : 54641246		NA (in 1 replicates)	-0.43 $\pm$ 0.08 Treatment | Score CSNK1A1.WT.3 | -0.34 MAPKAP1.WT | -0.44 SGK3.WT.2 | -0.50	NA				Total number of assays tested in: 37.
BRD-K62613235-001-04-9 SMR000627657 MLS001123513 MLS003880826 HMS2253J10 ZINC9441656 PubChem CID : 22552136		NA (in 1 replicates)	-0.42 $\pm$ 0.17 Treatment | Score CSNK1A1.WT.3 | -0.23 MAPKAP1.WT | -0.55 SGK3.WT.2 | -0.48	NA				Total number of assays tested in: 486. Active in the following assays: • qHTS for Inhibitors of human tyrosyl-DNA phosphodiesterase 1 (TDP1): qHTS in cells in presence of CPT (AID 686979)
BRD-K14997413-001-01-5 PubChem CID : 44494941		0.91 (in 2 replicates)	-0.42 $\pm$ 0.15 Treatment | Score CSNK1A1.WT.3 | -0.59 MAPKAP1.WT | -0.28 SGK3.WT.2 | -0.38	0.352 $\pm$ 0.103 Treatment | Score CSNK1A1.WT.3 | 0.238 MAPKAP1.WT | 0.379 SGK3.WT.2 | 0.438				Total number of assays tested in: 33.
BRD-K76431854-001-01-6 PubChem CID : 56835376		0.78 (in 3 replicates)	-0.42 $\pm$ 0.18 Treatment | Score CSNK1A1.WT.3 | -0.61 MAPKAP1.WT | -0.26 SGK3.WT.2 | -0.38	0.250 $\pm$ 0.042 Treatment | Score CSNK1A1.WT.3 | 0.238 MAPKAP1.WT | 0.296 SGK3.WT.2 | 0.215				Total number of assays tested in: 33.