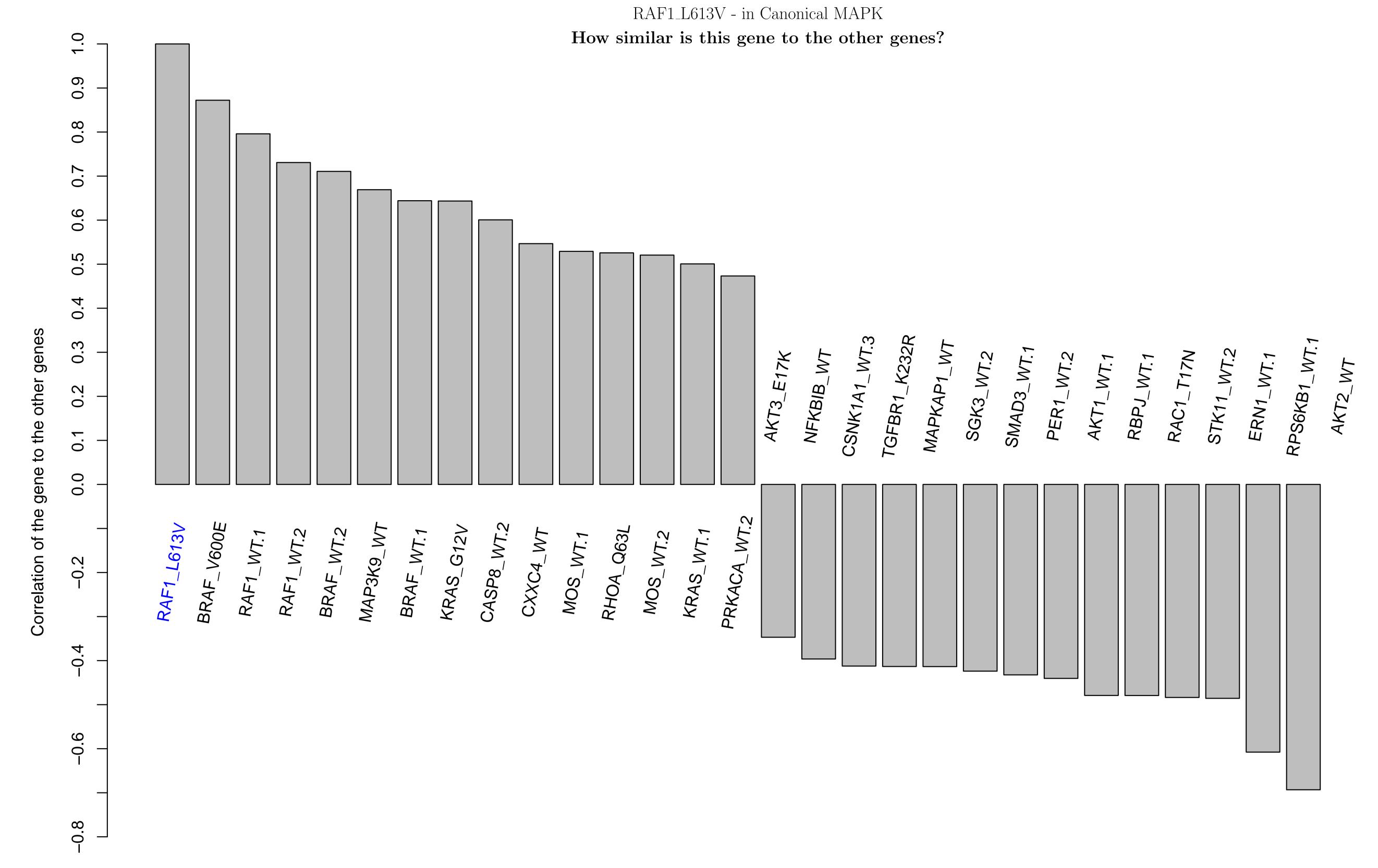
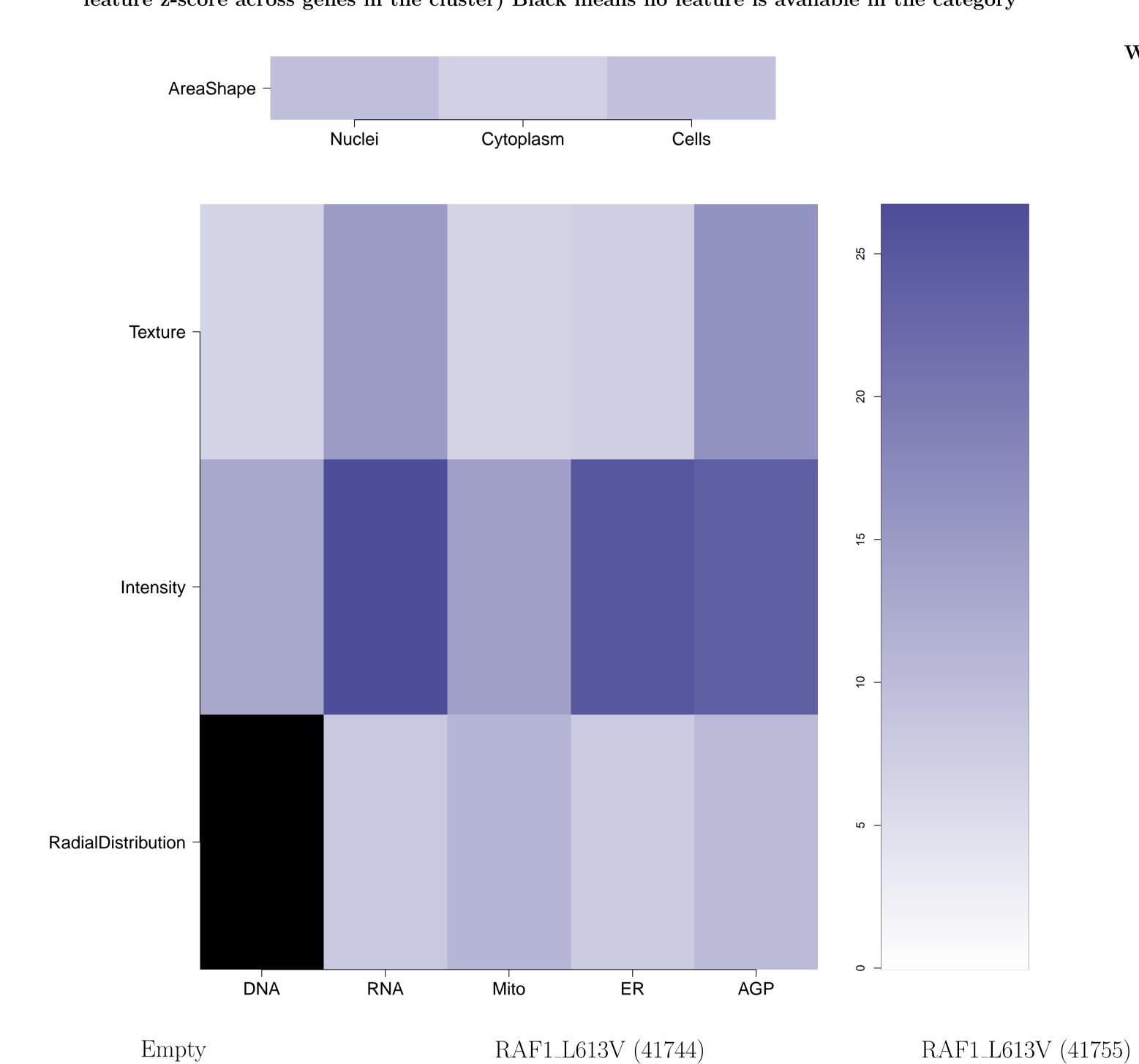
CONFIDENTIAL, contact the Imaging Platform to collaborate on the findings herein



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



RNA

ER

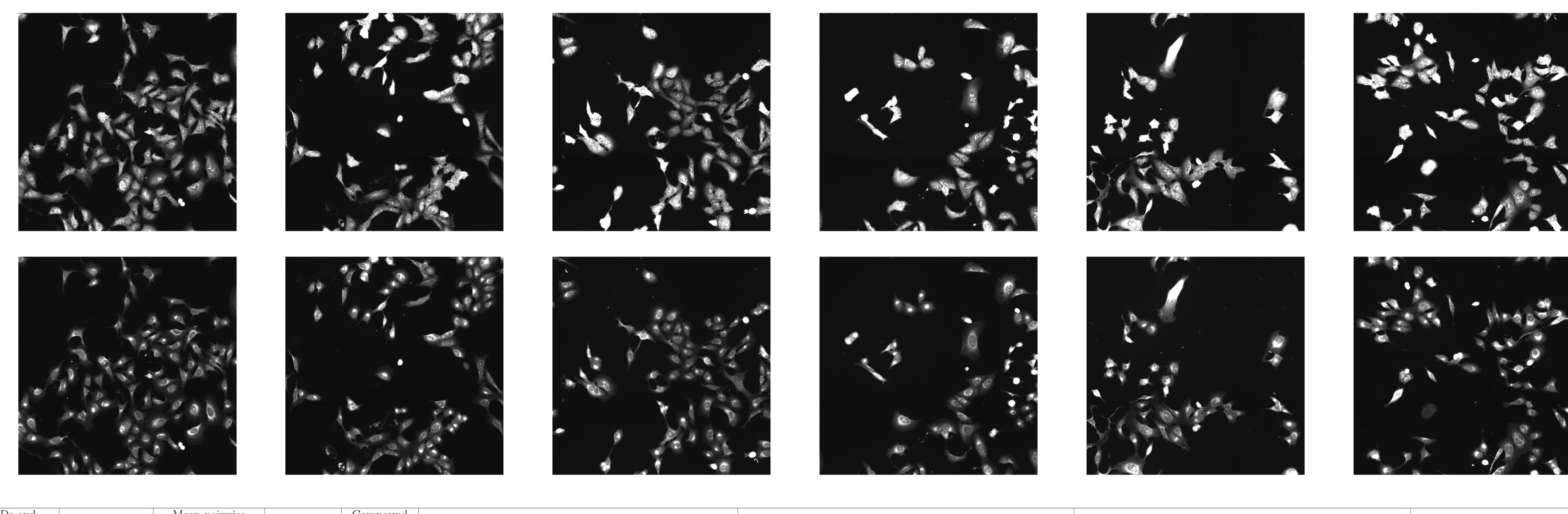
Which individual morphological features are distinguishing in the gene relative to the untreated samples? Blue/Red means the feature has a positive/negative z-score. Size is proportional to the z-score value.

RAF1\_L613V (41757)

RAF1\_L613V (41754)



RAF1\_L613V (41756)



Compound IDs and Compound Mean pairwise rank when replicates common names (where Correlation Distinguishing individual features for the compound relative to Number of PubChem assays in which How similar is the compound signature to the genes in this available); blue/red colored correlation of the scored Chemical Common distinguishing feature categories in the compound and between untreated samples. Black means a mismatch; i.e. active (= high the compound was tested; assays in experiment? (Yellow and red lines correspond to top/bottom box means the matching compound signature against the compound the gene relative to the untreated samples z-score in magnitude) in the compound, and either inactive (= which the compound was active are structure compound is (95th DMSO 1st and 5th percentile DMSO correlation to all the genes) gene using small z-score in magnitude) or oppositely active in the gene the gene itemized positively/negatively replicate correlation L1000 correlated with the cluster is 0.52) profiling

Cytoplasm Total number of assays tested in: 633. Active in the following assays: Cytoplasm\_Intensity\_MinIntensityEdge\_ER • Multiplexed high-throughput screen for small molecule regulators of RGS family protein interactions, specifically RGS16-Galphao. (AID Cells\_Intensity\_MedianIntensity\_RNA Cells\_RadialDistribution\_RadialCV\_ER\_4of4 BRD-K53719842-001-06-5 RAF1\_L613V

BRAF\_V600E

DDIT3\_WT2

KRAS\_G12V

MOS\_WT2

RAF1\_WT.1

MOS\_WT.1

MOS\_WT.1

DDIT3\_WT.1

RAF1\_WT.2

TP53\_WT.1

RAF1\_WT.2

TP53\_WT.1

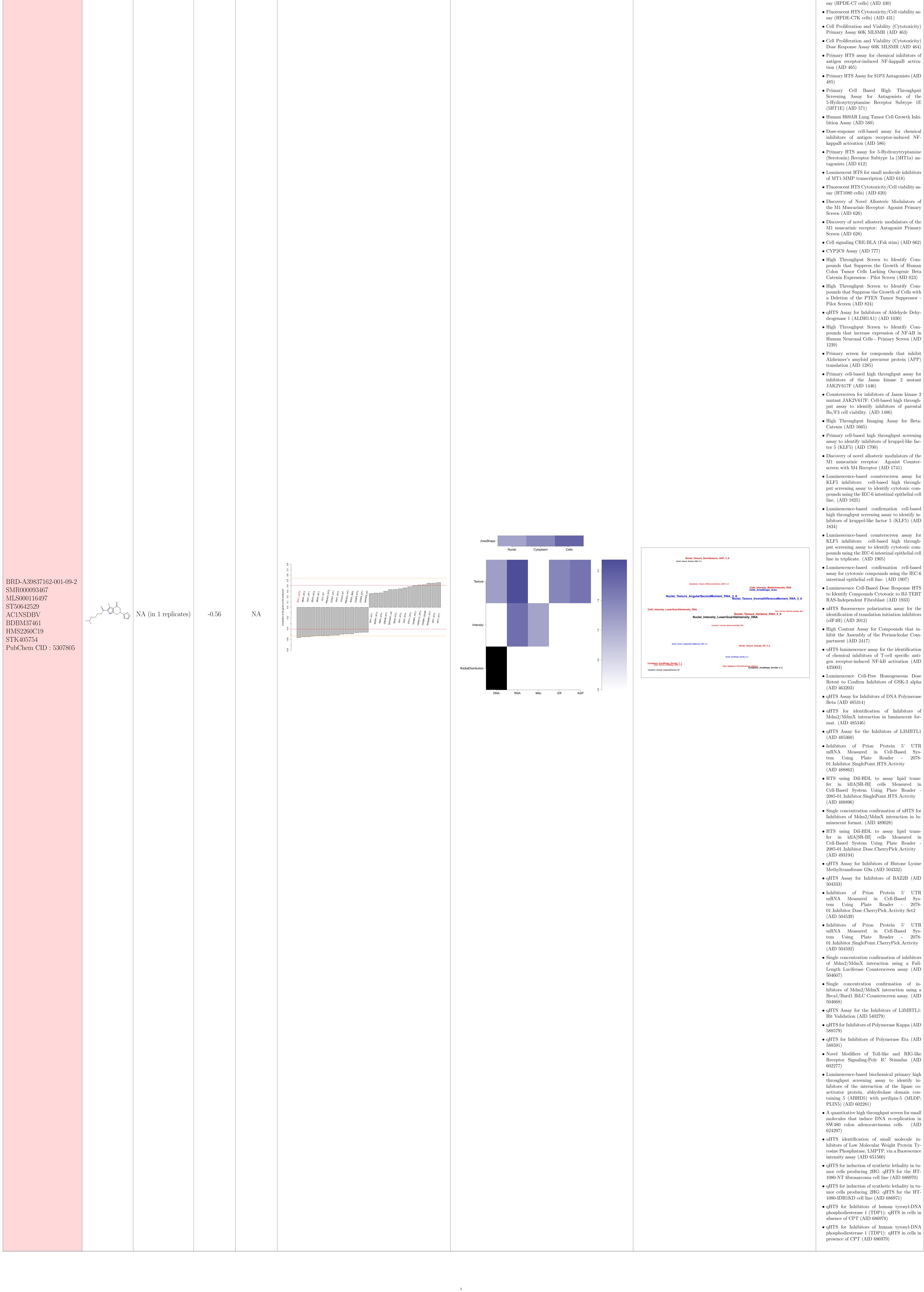
RHOA\_Q63L

PRKACA\_WT.2 • Multiplexed high-throughput screen for small molecule regulators of RGS family protein in-SMR000206475 Cells\_RadialDistribution\_RadialCV\_RNA\_30f4
Cells\_Intensity\_LowerQuartileIntensity\_RNA MLS000582489 teractions. (AID 1504) RAC1\_T17N
NFKBIB\_WT
RBPL\_WT.1
STK11\_WT.2
AKT1\_WT.1
PTEN\_WT
YAP1\_WT.2
RPS6KB1\_WT.1
CDK2\_WT.1
CDK2\_WT.1
CSK1A1\_WT.2
GSK3B\_WT.1
TGFBR1\_K232R
TGFBR1\_K232R NA (in 1 replicates) -0.63 HMS2517A04 • MLPCN maternal gene expression-MEX-5 TCR-2 binding assay-Primary Screen (AID HMS3376B19 Cytoplasm\_Intensity\_MinIntensityEdge\_RNA Intensity -1832) ZINC4958796 • Fluorescent Polarization Homogeneous Dose PubChem CID : 12004860 Cells\_RadialDistribution\_MeanFrac\_RNA\_40f4

Nuclei\_Texture\_AngularSecondMoment\_AGP\_5\_0

Cytoplasm\_Intensity\_IntegratedIntensityEdge\_RNA

Nuclei\_Intensity\_IntegratedIntensityEdge\_RNA Retest to Confirm Inhibitors of Mex-5 Binding to TCR-2 (AID 449745) Cytoplasm\_Texture\_InfoMeas2\_ER\_5\_0
Nuclei\_AreaShape\_Zernike\_6\_6 • Primary qHTS for delayed death inhibitors of the malarial parasite plastid, 96 hour incuba-tion (AID 504834) RadialDistribution -Mito ER RNA



Total number of assays tested in: 759. Active in the following assays:

• Fluorescent HTS Cytotoxicity/Cell viability as-

• Fluorescent HTS Cytotoxicity/Cell viability assay (HPDE-C7K cells) (AID 431)

Primary Assay 60K MLSMR (AID 463)

• Cell Proliferation and Viability (Cytotoxicity) Dose Response Assay 60K MLSMR (AID 464)

• Primary HTS assay for chemical inhibitors of antigen receptor-induced NF-kappaB activa-

• Primary Cell Based High Throughput Screening Assay for Antagonists of the 5-Hydroxytryptamine Receptor Subtype 1E

• Human H69AR Lung Tumor Cell Growth Inhi-

• Dose-response cell-based assay for chemical

inhibitors of antigen receptor-induced NFkappaB activation (AID 586)

(Serotonin) Receptor Subtype 1a (5HT1a) an-

of MT1-MMP transcription (AID 618)

• Fluorescent HTS Cytotoxicity/Cell viability as-

• Discovery of Novel Allosteric Modulators of the M1 Muscarinic Receptor: Agonist Primary

• Discovery of novel allosteric modulators of the M1 muscarinic receptor: Antagonist Primary

• Cell signaling CRE-BLA (Fsk stim) (AID 662)

• High Throughput Screen to Identify Compounds that Suppress the Growth of Human Colon Tumor Cells Lacking Oncogenic Beta

• High Throughput Screen to Identify Compounds that Suppress the Growth of Cells with a Deletion of the PTEN Tumor Suppressor -

drogenase 1 (ALDH1A1) (AID 1030)

• High Throughput Screen to Identify Compounds that increase expression of NF-kB in Human Neuronal Cells - Primary Screen (AID

Alzheimer's amyloid precursor protein (APP)

inhibitors of the Janus kinase 2 mutant JAK2V617F (AID 1446) • Counterscreen for inhibitors of Janus kinase 2

mutant JAK2V617F: Cell-based high throughput assay to identify inhibitors of parental Ba/F3 cell viability. (AID 1486)

• High Throughput Imaging Assay for Beta-• Primary cell-based high throughput screening

tor 5 (KLF5) (AID 1700) • Discovery of novel allosteric modulators of the M1 muscarinic receptor: Agonist Counter-

• Luminescence-based counterscreen assay for KLF5 inhibitors: cell-based high throughput screening assay to identify cytotoxic com-

pounds using the IEC-6 intestinal epithelial cell • Luminescence-based confirmation cell-based high throughput screening assay to identify in-

hibitors of kruppel-like factor 5 (KLF5) (AID • Luminescence-based counterscreen assay for

put screening assay to identify cytotoxic compounds using the IEC-6 intestinal epithelial cell line in triplicate. (AID 1905)

• Luminescence-based confirmation cell-based assay for cytotoxic compounds using the IEC-6 intestinal epithelial cell line. (AID 1907)

RAS-Independent Fibroblast (AID 1933) • uHTS fluorescence polarization assay for the

identification of translation initiation inhibitors • High Content Assay for Compounds that in-

hibit the Assembly of the Perinucleolar Com-

• uHTS luminescence assay for the identification of chemical inhibitors of T-cell specific antigen receptor-induced NF-kB activation (AID

• Luminescence Cell-Free Homogeneous Dose Retest to Confirm Inhibitors of GSK-3 alpha

• qHTS Assay for Inhibitors of DNA Polymerase

Mdm2/MdmX interaction in luminescent for-

• qHTS Assay for the Inhibitors of L3MBTL1

• Inhibitors of Prion Protein 5' UTR

mRNA Measured in Cell-Based System Using Plate Reader - 2078-01\_Inhibitor\_SinglePoint\_HTS\_Activity

fer in ldlA[SR-BI] cells Measured in Cell-Based System Using Plate Reader  $2085\text{-}01\_Inhibitor\_SinglePoint\_HTS\_Activity$ 

• Single concentration confirmation of uHTS for Inhibitors of Mdm2/MdmX interaction in lu-

• HTS using DiI-HDL to assay lipid transfer in ldlA[SR-BI] cells Measured in Cell-Based System Using Plate Reader 2085-01\_Inhibitor\_Dose\_CherryPick\_Activity

• qHTS Assay for Inhibitors of Histone Lysine Methyltransferase G9a (AID 504332)

• qHTS Assay for Inhibitors of BAZ2B (AID

mRNA Measured in Cell-Based System Using Plate Reader - 2078- $01\_Inhibitor\_Dose\_CherryPick\_Activity\_Set2$ 

• Inhibitors of Prion Protein 5' UTR mRNA Measured in Cell-Based System Using Plate Reader - 2078-01\_Inhibitor\_SinglePoint\_CherryPick\_Activity

of Mdm2/MdmX interaction using a Full-Length Luciferase Counterscreen assay (AID

hibitors of Mdm2/MdmX interaction using a Brca1/Bard1 BiLC Counterscreen assay. (AID

Hit Validation (AID 540279)

• qHTS for Inhibitors of Polymerase Eta (AID

Receptor Signaling-Poly IC Stimulus (AID

throughput screening assay to identify inhibitors of the interaction of the lipase coactivator protein, abhydrolase domain containing 5 (ABHD5) with perilipin-5 (MLDP;

molecules that induce DNA re-replication in SW480 colon adenocarcinoma cells. (AID

hibitors of Low Molecular Weight Protein Tyrosine Phosphatase, LMPTP, via a fluorescence intensity assay (AID 651560) • qHTS for induction of synthetic lethality in tu-

mor 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-

• qHTS for Inhibitors of human tyrosyl-DNA phosphodiesterase 1 (TDP1): qHTS in cells in

• qHTS for Inhibitors of human tyrosyl-DNA phosphodiesterase 1 (TDP1): qHTS in cells in