Supporting Information

Exploiting an Asp-Glu "switch" in Glycogen Synthase Kinase 3 to design paralog selective inhibitors for use in acute myeloid leukemia

Authors: Florence F. Wagner[1†*], Lina Benajiba[2,3,4†], Arthur J. Campbell[1], Michel Weïwer[1], Joshua R. Sacher[1], Jennifer P. Gale[1], Linda Ross[3], Alexandre Puissant[5], Gabriela Alexe[2,3,6], Amy Conway[3], Morgan Back[2,3], Yana Pikman[2,3], Ilene Galinsky[7], Daniel J. DeAngelo[7], Richard M. Stone[7], Taner Kaya[1], Xi Shi[1], Matthew B. Robers[8], Thomas Machleidt[8], Jennifer Wilkinson[8], Olivier Hermine[9], Andrew Kung[10], Adam J. Stein[11], Damodharan Lakshminarasimhan[12], Michael T. Hemann[13], Edward Scolnick[1], Yan-Ling Zhang[1], Jen Q. Pan[1], Kimberly Stegmaier[2,3*#], Edward B. Holson[1,**#]

Table of Contents

Experimental conditions and parameters for X-ray co-crystal structures of hGSK3β with BRD0209, BRD3731 and BRD0705 (Xtal Biostructures)

X-ray co-crystals were obtained at Xtal BioStructures, Natick, MA.

Co-crystal structure determination: Recombinant human GSK3β was generated as previously reported [Wagner, 2016]. GSK3β was co-crystallized with 5 molar excess compound using the sitting drop and vapor diffusion at 24 °C. The reservoir solution contained 0.15 M DL-malic acid pH 7.0, 20% (w/v) PEG 3350; 0.1 M Bis-Tris pH 6.5, 25% (w/v) PEG 3350; and 0.2 M Sodium acetate pH 7.0, 20% (w/v) PEG 3350 for co-crystallization with BRD0209, BRD0705, and BRD3731, respectively. The X-ray diffraction data were measured at beamline X29A, NSLS, Brookhaven National Laboratory for the complex with BRD0209, and Beamline 08ID-1, Canadian Light Source for complexes with BRD0705 and BRD3731. The X-ray diffraction data were processed using HKL2000 and SCALEPACK [Otwinowski and Minor, 1997], as summarized in Table S1. The crystal structures were solved by molecular replacement with PHASER using in house structure of GSK3β as starting models. The models were rebuilt using COOT [Emsley et al. 2010] and refined using REFMAC5 [Vagin 2004]. The electron density corresponding to the compounds is illustrated in Figure S3. The statistics of the refined structures are summarized in Table S2.

Table S1. X-ray data reduction statistics for X-ray co-crystal structures of hGSK3β with BRD0209, BRD3731 and BRD0705.

	GSK3B-BRD0209	GSK3B-BRD0705	GSK3B-BRD3731
Space group	*P*1	*C*2	*P*1
Wavelength	1.075 Å	0.9795 Å	0.9795 Å
Unit cell	*a* = 64.37 Å, *b* = 67.71 Å, *c* = 67.56 Å, α = 79.56°, β = 88.18°, γ = 76.50°	*a* = 104.63 Å, *b* = 85.43 Å, *c* = 112.07 Å, β = 95.08°	*a* = 63.98 Å, *b* = 67.49 Å, *c* = 67.63 Å, α=79.14°, β = 76.72°, γ = 88.90°
Resolution range (Å)	50-2.4 (2.5 – 2.4)	50-2.4 (2.7 – 2.6)	37-2.7 (2.8 – 2.7)
Number of measurements	510,924	114,626	58,302
Number of unique reflections	41,861	30,464	29,474
R_{sym}(%)[a]	7.1 (51)	8.3 (60)	5.8 (45)
Completeness (%)[a]	98 (94)	100 (100)	99 (98)
I/σ[a]	17.4 (2.1)	14.9 (2.7)	13.7 (2.0)

[a] Numbers in the parentheses are for the highest resolution shell.

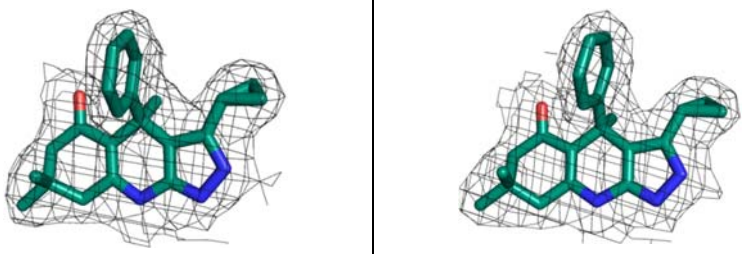
Table S2. Crystallographic refinement statistics for X-ray co-crystal structures of hGSK3β with BRD0209, BRD3731 and BRD0705.

	GSK3B-BRD0209	GSK3B-BRD0705	GSK3B-BRD3731
Resolution range (Å)	50-2.4	50-2.6	50-2.7
R_{cryst} (%)	16.7	17.8	17.5
R_{free} (%)	22.4	24.4	24.0
Molecules per asymmetric unit	2	2	2
Number of waters	240	97	63
Rmsd bond lengths (Å)[a]	0.015	0.013	0.014
Rmsd bond angles (°)[a]	1.90	1.72	1.76
Average *B*-factors (Å^2)			
Main chain atoms	53.9, 53.2	71.1, 65.9	61.4, 63.2
Side chain atoms	59.2, 59.4	76.8, 71.7	66.3, 68.7
Ligands	39.0, 37.1	59.1, 56.6	47.0, 54.6
Waters	53.4	59.4	53.9
Ramachandran Plot (%)			
Favored	99.7	99.0	99.5
Generously allowed	0.0	0.7	0.2
Disallowed	0.3	0.3	0.3
RCSB entry	5KPK.pdb	5KPL.pdb	5KPM.pdb

[a] Root-mean square deviation (rmsd) from the target stereochemistry (Engh and Huber, 1991).

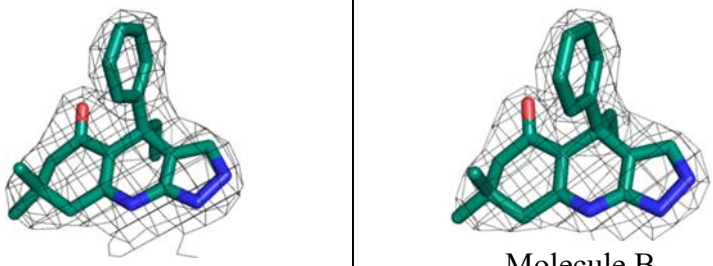
Electron density map (SigmaA-weighted $2mF_o$-DF_c, contoured at 1σ) corresponding to the compound BRD0209(a), BRD0705(b) and BRD3731(c) bound to 2 GSK3β in the asymmetric unit.

a.



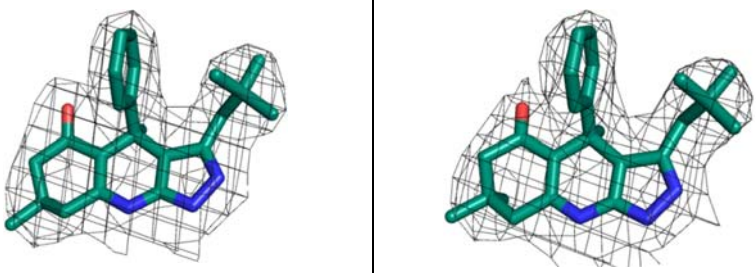
Molecule A | Molecule B

b.



Molecule A | Molecule B

c.



Molecule A | Molecule B

References:

Wagner FF., Bishop JA., …, Holson EB., Pan JQ. (2016) "Inhibitors of Glycogen Synthase Kinase 3 with Exquisite Kinome-Wide Selectivity and Their Functional Effects" *ACS Chem. Bio*. 11 (7), 1952–1963.

Emsley P, Lohkamp B, Scott WG and Cowtan K (2010) "Features and Development of COOT" *Acta Cryst. D***66**:486-501.

Engh RA and Huber R (1991) "Accurate bond and angle parameters for X-ray protein structure refinement" *Acta Cryst. A***47**:392-400

Otwinowski Z and Minor W (1997) “Processing of X-ray Diffraction Data Collected in Oscillation Mode” *Meth. Enzymol.* **276**:307-326.

Vagin, A.A., Steiner, R..S., Lebedev, A.A., Potterton, L., McNicholas, S., Long, F. and Murshudov, G.N. (2004) “REFMAC5 dictionary: organization of prior chemical knowledge and guidelines for its use” *Acta Cryst. D* **60**: 2284-2295.

Experimental conditions and parameters for X-ray co-crystal structures of GSK3β(D133E) with BRD0705

X-ray co-crystals were obtained at Cayman Chemical, Ann Arbor, MI.

Expression and Purification of Mutant GSK-3β. Mutant D133E GSK-3β (1-420) with an N-terminal GST-tag and a thrombin cleavage site was heterologously expressed in insect Sf9 cells using the Bac-to-Bac Baculovirus System (Life Technologies). Mutant D133E GSK-3β was purified using GST chromatography, anion exchange, and size exclusion chromatography. To generate material for crystallographic studies, thrombin was added to mutant GSK-3β, quenched with PMSF and flowed over GST resin to remove the free GST. The cleaved material was further purified by applying it to a FastFlow SP column (GE Healthcare) equilibrated with 50 mM HEPES pH 7.0, 40 mM NaCl, and 20% glycerol. Protein was eluted with a linear gradient from 0-500 mM NaCl in 20 column volumes and then dialyzed against 50 mM HEPES pH 7.0, 150 mM NaCl, and 1 mM DTT at 4˚C overnight and then concentrated to 6.5 mg/mL for crystallization. Mutant D133E GSK-3β was confirmed by mass spectrometry.

Crystallization. To generate crystals of BRD0705/mutant GSK-3β, 2.5 mM BRD0705 was added to concentrated protein and incubated on ice for 1 hour. Mutant complex crystallization was then carried out using sitting drop vapor diffusion. The mutant complex formed diamond-shaped crystals over a reservoir containing 20% PEG MME 5,000 and 0.1 M Bis-Tris, pH 6.5. Crystals were harvested, cryo-protected in the mother liquor supplemented with 20% glycerol and then flash frozen in liquid nitrogen for data collection.

Data collection and structure determination. Mutant complex structure was solved by molecular replacement using x-ray diffraction data collected at beamline LS-CAT of the Advanced Photon Source, Lemont, IL. Diffraction images were scaled and processed with HKL2000 (Otwinowski and Minor, 1997). Statistics are summarized in Table 1. The crystallographic space group was C2 with unit cell dimensions of a=107.96 Å, b=84.22 Å, c=117.22 Å and α=γ=90˚, β=94.7˚. To solve the structure, wild-type GSK-3β (PDB ID: 4PTE) with the D133 side chain deleted was used as the starting model in PHASER (McCoy, 2007). The asymmetric unit contained 2 molecules of mutated GSK-3β/BRD0705. Multiple rounds of building and refinement in the absence of both the mutated side chain and BRD0705 were performed using REFMAC (Vagin, 2004) and COOT (Emsley, 2004). In the later rounds, both the D133E side chain and BRD0705 were added and refined. The final model contained residues 35-381 (molecule A) and 36-382 (molecule B) and 2 molecules of BRD0705. Refinement statistics are summarized in Table 2.

References:

Otwinowski, Z. and Minor, W. Processing of X-ray diffraction data collected in oscillation mode (1997). *Methods Enzymol.* 276: 307-326. (*HKL2000)*

McCoy, A.J., Grosse-Kunstleve, R..W., Adams, P.D., Winn, M.D., Storoni, L.C. and Read, R.J. Phaser crystallographic software. (2007) Copyright © International Union of Crystallography.

Vagin, A.A., Steiner, R..S., Lebedev, A.A., Potterton, L., McNicholas, S., Long, F. and Murshudov, G.N. REFMAC5 dictionary: organization of prior chemical knowledge and guidelines for its use (2004). *Acta Cryst. D* 60: 2284-2295.
Emsley, P. and Cowtan, K. *COOT*: model-building tools for molecular graphics (2004). *Acta Crystallogr*. *D* 60: 2126-2132.

Table S3. Final diffraction statistics for the mutant hGSK3B (D133E)/BRD0705 complex crystal used in structure determination.

	mutGSK3β/BRD0705
Data collection	
Space group	C2
Cell dimensions	
***a*, *b*, *c* (Å)**	107.96, 84.22, 117.22
α, β, γ (°)	90, 94.70, 90
Resolution (Å)	50.00-2.85 (2.95-2.85)
R_{sym} **or** R_{merge}	0.089 (0.66)
$I/\sigma I$	13.3 (1.8)
Completeness (%)	99.6 (100.0)
Redundancy	3.8 (3.8)
Mosaicity (°)	0.66
Molecules in A.U.	2

*Parenthesis denotes the highest resolution shell.

Table S4. Final refinement statistics for the mutant hGSK3B (D133E)/BRD0705 complex structure.

	mutGSK3β/BRD0705
Data Refinement	
Resolution Range (Å)	47-2.85
R_{work} **(%)**	0.192
R_{free} **(%)**	0.258
Number of Molecules	
BRD0705	2
Bond Lengths (Å)	0.012
Bond angles (°)	1.72
Average B-factors (Å^2)	
Main chain atoms	58.9
Side chain atoms	61.0
BRD0705	71.0
Ramachandran Plot (%)	
Favored Residues	93.1
Allowed Residues	6.3
Outlier Residues	0.6

Experimental conditions for molecular dynamics simulations

Molecular dynamics simulations of apo-GSK3A and apo-GSK3B systems were run to help rationalize any structural differences between the two paralogs. Since competitive inhibitors were being developed in this work, specific attention was given to the ATP binding pocket region in the analysis. Desmond was employed to run these molecular dynamics simulations (Desmond Molecular Dynamics System, version 3.8, D. E. Shaw Research, New York, NY, 2014. Maestro-Desmond Interoperability Tools, version 3.8, Schrödinger, New York, NY, 2014 and Bowers, 2006). Two sets of simulations were run, each set included 7 separate 100ns unrestrained molecular dynamics simulations starting from a random velocity seed to investigate the reproducibility of any findings. The two sets of systems simulated were the apo-GSK3A and apo-GSK3B kinases. The apo-GSK3B system was built from our recently solved GSK3B-0209 crystal structure. For the apo-GSK3B system preparation, all crystallographic waters, ions and ligands were removed from the crystallographic structure were removed in the Protein Preparation Wizard of Maestro. The phosphorylated state of Tyr216 in GSK3B in the activation loop was maintained. The protein was run through Protein Preparation Wizard in Maestro, version 9.8 (Schrödinger, LLC, New York, NY, 2014) using the default settings as well as building in any missing sidechains (Sastry, 2013). The system was neutralized with counterions and put in an orthorhombic water box with buffer boundary conditions of (10.0Å, 10.0 Å, 10.0 Å). The system was solvated with TIP3P and had a salt concentration of 0.15M with Na+ and Cl- ions. The OPLS2.1 force field was used for this system (Shivakumar, 2010). The default settings were selected for the minimization and equilibration protocol. Random velocity seeds were selected to begin each production run. Following the minimization and equilibration protocol was a production run of 100ns of unrestrained molecular dynamics. All production runs were simulated at 300K.

Since there are no publicly available structures of GSK3A, an homology model was needed to be built for the apo-GSK3A system. Prime, version 3.6, (Schrödinger, LLC, New York, NY, 2014) was employed to model the apo-GSK3A system (Jacobson, 2002 and 2004). The recently solved GSK3B-0209 X-ray crystallographic structure was used as the template structure due to its high homology (see main text for further details). The human GSK3A sequence used was from UniProt ID P49840. The phosphorylated state of Tyr279 in GSK3A of the activation loop was maintained. All other parameters were the same as the apo-GSK3B system protocol described above for the system set up and simulation.

Cluster analysis: representative structure in figure 1c

Schrödinger's trajectory_cluster.py python script was employed to cluster all trajectories from each system individually. To obtain an accurate view of the dominate backend conformations the three backend residues described in supplemental figure S3 and S4 were selected for the clustering calculation: GSK3A (Glu196, Arg176, and Glu143) and GSK3B (Asp133, Arg113, Glu80). Only the sidechain heavy atoms of these three residues were selected for the calculation. The

representative structures from run 4 of apo-GSK3A and run 5 of apo-GSK3B are shown in figure 1C panel 1 and 2 respectively.

References:

Kevin J. Bowers, Edmond Chow, Huafeng Xu, Ron O. Dror, Michael P. Eastwood, Brent A. Gregersen, John L. Klepeis, Istvan Kolossvary, Mark A. Moraes, Federico D. Sacerdoti, John K. Salmon, Yibing Shan, and David E. Shaw, "Scalable Algorithms for Molecular Dynamics Simulations on Commodity Clusters," Proceedings of the ACM/IEEE Conference on Supercomputing (SC06), Tampa, Florida, 2006, November 11-17.

Sastry, G.M.; Adzhigirey, M.; Day, T.; Annabhimoju, R.; Sherman, W., "Protein and ligand preparation: Parameters, protocols, and influence on virtual screening enrichments," J. Comput. Aid. Mol. Des., 2013, 27(3), 221-234.

Shivakumar, D.; Williams, J.; Wu, Y.; Damm, W.; Shelley, J.; Sherman, W., "Prediction of Absolute Solvation Free Energies using Molecular Dynamics Free Energy Perturbation and the OPLS Force Field," J. Chem. Theory Comput., 2010, 6, 1509–1519.

Jacobson, M. P.; Pincus, D. L.; Rapp, C. S.; Day, T. J. F.; Honig, B.; Shaw, D. E.; Friesner, R. A., "A Hierarchical Approach to All-Atom Protein Loop Prediction," Proteins: Structure, Function and Bioinformatics, 2004, 55, 351-367.

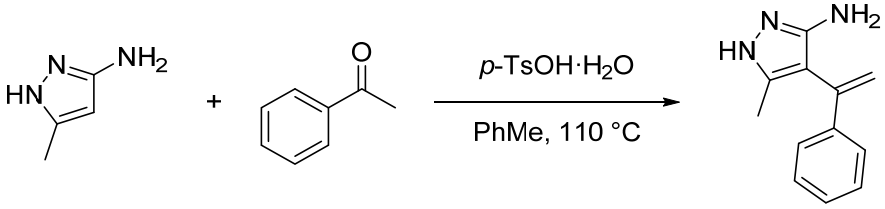
Jacobson, M. P.; Friesner, R.A.; Xiang, Z.; Honig, B., "On the Role of Crystal Packing Forces in Determining Protein Sidechain Conformations," J. Mol. Biol., 2002, 320, 597-608.

Synthesis and Characterization of Compounds

All final compounds were confirmed to be of >95% purity based on HPLC LC-MS analysis (Alliance 2795, Waters, Milford, MA) unless otherwise noted. Purity was measured by UV absorbance at 210 nm. Identity was determined on a SQ mass spectrometer by positive and negative electrospray ionization. Mobile phase A consisted of 0.01% formic acid in water, while mobile phase B consisted of 0.01% formic acid in acetonitrile. The gradient ran from 5% to 95% mobile phase B over 1.75 minutes at 1.75 mL/min. An Agilent Poroshell 120 ECC18, 2.7 µm, 3.0x30 mm column was used with column temperature maintained at 40 °C. 2.1 µL of sample solution were injected. All reagents and solvents were purchased from commercial vendors and used as received. ^{1}H and ^{13}C NMR spectra were recorded on a Bruker 300 MHz, Bruker 400 MHz, or Varian UNITY INOVA 500 MHz spectrometer as indicated. Proton and carbon chemical shifts (δ) are reported in ppm relative to $CDCl_3$ (^{1}H δ 7.26, ^{13}C δ 77.16), CD_3OD (^{1}H δ 3.31, ^{13}C δ 49.00) and d6-DMSO (^{1}H δ 2.50, ^{13}C δ 39.52). NMR data are reported as follows: δ, multiplicity (br = broad, s = singlet, d = doublet, t = triplet, m = multiplet); coupling constants in Hz; integration. NMR data were collected at 25 °C. Flash chromatography was performed using 40-60 µm Silica Gel (60 Å mesh) on a Teledyne Isco Combiflash R*f* system.

General Procedure for the Synthesis of Pyrazolodihydroquinolinones

Step 1: Example procedure for SEAr of Aminopyrazoles with Ketones

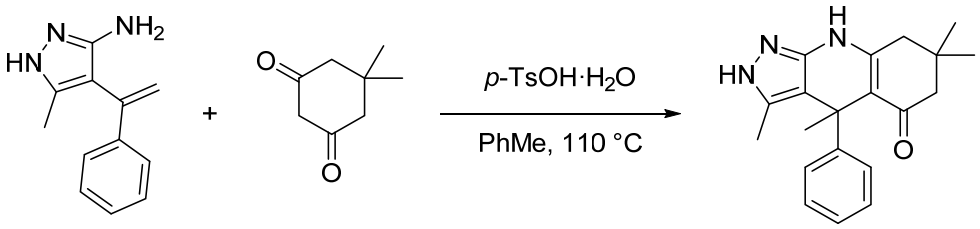


5-methyl-4-(1-phenylvinyl)-1H-pyrazol-3-amine.

To a solution of 5-methyl-1H-pyrazol-2-amine (500 mg, 5.15 mmol, 1.0 eq) in toluene (20 mL) were added acetophenone (619 mg, 5.15 mmol, 1.0 eq) and *p*-toluenesulfonic acid monohydrate (98 mg, 0.52 mmol, 0.1 eq). The reaction mixture was heated at reflux for 16 h, and the solvent was evaporated. The residue was purified by flash column chromatography (SiO_2, 4%

MeOH/CH_2Cl_2) to provide the styrenyl pyrazole (350 mg, 34%) as a white solid: MS (ESI) $[M+H]^+$ calcd for $C_{12}H_{14}N_3$ 200.1, found 200.1.

Step 2: Example procedure for Condensation/Cyclization with Dimedone
Method A



(*S*)-3,4,7,7-tetramethyl-4-phenyl-2,4,6,7,8,9-hexahydro-5H-pyrazolo[3,4-*b*]quinolin-5-one (3).

To a solution of the above styrenyl pyrazole (200 mg, 1.00 mmol, 1.0 eq) in toluene (1 mL) were added dimedone (141 mg, 1.00 mmol, 1.0 eq) and *p*-toluenesulfonic acid monohydrate (95 mg, 0.50 mmol, 0.5 eq). The reaction mixture was heated at 110 °C for 24 h, then cooled to room temperature. Water and saturated aqueous $NaHCO_3$ were added, and the layers were separated. The aqueous layer was extracted with CH_2Cl_2, and the combined organics were dried over Na_2SO_4, filtered, and evaporated. The residue was purified by flash column chromatography (SiO_2, 4% MeOH/CH_2Cl_2) to provide the tricyclic compound ***rac*-3** (150 mg, 47%) as a white solid.

Chiral separation: Chiralpak IC, 90:10 A/B (A = 0.1% DEA/*n*-hexane, B = 1:1 CH_2Cl_2/MeOH)).

Characterization of ***rac*-3**:

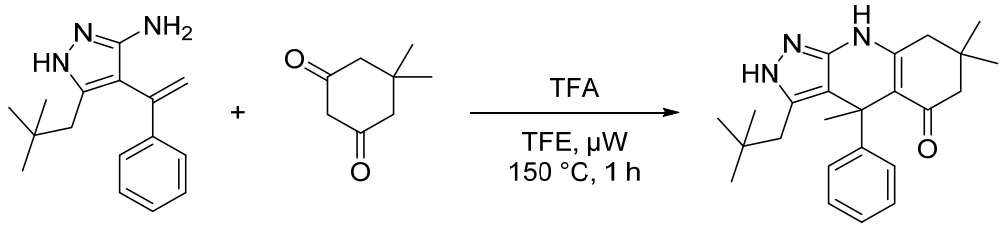
^{1}H NMR (400 MHz, DMSO-d6) δ 11.58 (s, 1H), 9.57 (s, 1H), 7.26 (d, *J* = 7.2 Hz, 2H), 7.15 (t, *J* = 7.6 Hz, 2H), 6.99 (t, *J* = 7.2 Hz, 1H), 2.40 (s, 2H), 1.99 (d, *J* = 16.0 Hz, 1H), 1.87 (d, *J* = 16.0 Hz, 1H), 1.83 (s, 3H), 1.60 (s, 3H), 0.99 (s, 3H), 0.95 (s, 3H).

HRMS calcd for $C_{20}H_{24}N_3O$ 321.1841, found 321.1849. $[M+H]^+$ observed.

HPLC purity 97%, >99.9% *er*.

$[\alpha]_D^{20}$(*c* = 0.25, MeOH) -180.9°.

Method B



(*S*)-4,7,7-trimethyl-3-neopentyl-4-phenyl-2,4,6,7,8,9-hexahydro-5H-pyrazolo[3,4-b]quinolin-5-one (BRD3731).

A solution of 5-neopentyl-4-(1-phenylvinyl)-1H-pyrazol-3-amine (1.14 g, 4.44 mmol, 1.0 eq), 5,5-dimethylcyclohexane-1,3-dione (623 mg, 4.44 mmol, 1.0 eq), and trifluoroacetic acid (340 µl, 4.44 mmol, 1.0 eq) in trifluoroethanol (17 mL) in a sealed microwave tube was heated at 150 °C for 1 h. The resulting dark yellow solution was evaporated, re-dissolved in CH_2Cl_2, and washed with saturated aqueous $NaHCO_3$. The aqueous layer was extracted with CH_2Cl_2, and the combined organics were dried over $MgSO_4$, filtered, and evaporated. The residue was purified by flash column chromatography (0-65% EtOAc/hexanes) to provide the cyclized compound ***rac*-BRD3731** (1.595 g, 4.22 mmol, 95% yield) as a tan solid.

Chiral separation: Chiralpak-IA 80:20 A:B (A = 0.1% DEA in *n*-hexane, B = 1:1 CH_2Cl_2/MeOH).

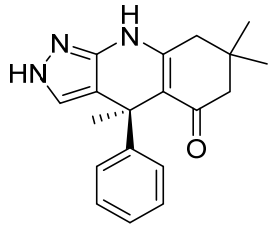
Characterization of **BRD3731**:

^{1}H NMR (300 MHz, DMSO-d6) δ 11.35 (s, 1H), 9.62 (s, 1H), 7.28 (d, *J* = 7.1 Hz, 2H), 7.14 (t, *J* = 7.7 Hz, 2H), 6.97 (t, *J* = 7.3 Hz, 1H), 2.46 - 2.33 (m, 2H), 2.17 - 1.86 (m, 4H), 1.86 (d, *J* = 2.3 Hz, 3H), 0.98 (s, 3H), 0.94 (s, 3H), 0.52 (s, 9H).

HRMS calcd for $C_{24}H_{31}N_3O$ 377.2467 found 377.2468. $[M-H]^-$ observed.

HPLC purity 99.5%, 99.7% *er*.

$[\alpha]_D^{20}$(*c* = 0.125, MeOH) -146.5°.



(*S*)-4,7,7-Trimethyl-4-phenyl-2,4,6,7,8,9-hexahydro-5H-pyrazolo[3,4-*b*]quinolin-5-one (1).

Step 1: yield 31%.

Step 2: Method A, yield 60%.

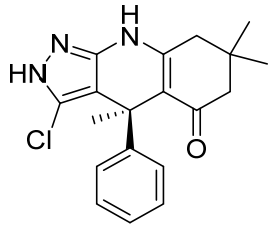
Chiral separation: Chiralpak-IC 85:15 A:B (A = 0.1% DEA in *n*-hexane, B = 1:1 CH_2Cl_2/MeOH).

^{1}HNMR (500 MHz, DMSO-d6) δ 11.90 (s, 1H), 9.67 (s, 1H), 7.28 (d, *J* = 7.5 Hz, 2H), 7.16 (t, *J* = 8.0 Hz, 2H), 7.09 (s, 1H), 6.99 (t, J = 7.0 Hz, 1H), 2.44 (s, 2H), 2.05 (d, J = 6.0Hz, 1H), 1.97 (s, 1H), 1.92 (s, 3H), 1.01 (s, 3H), 1.00 (s, 3H).

HRMS calcd for $C_{19}H_{21}N_3O$ 307.1685, found 307.1688. $[M+H]^+$ observed.

HPLC purity 99.8%, >99.9% *er*.

$[\alpha]_D^{20}$(*c* = 0.25, MeOH) -93.8°.



(*R*)-3-Chloro-4,7,7-trimethyl-4-phenyl-2,4,6,7,8,9-hexahydro-5H-pyrazolo[3,4-*b*]quinolin-5-one (2).

Step 1: yield 19%.

Step 2: Method A, yield 45%.

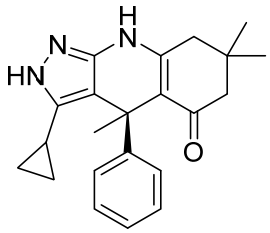
Chiral separation: Chiralpak-IC 80:20 A:B (A = 0.1% DEA in *n*-hexane, B = 1:1 CH_2Cl_2/MeOH).

^{1}H NMR (300 MHz, CD_3OD): δ 7.45-7.35 (d, *J* = 8.1 Hz, 2H), 7.25-7.15(m, 2H), 7.12-7.05 (t, *J* = 6.9 Hz, 1H), 2.41-2.35 (m, 2H), 2.20-2.05 (m, 2H), 2.02-1.97 (s, 3H), 1.05-0.99 (m, 6H).

HRMS calcd for $C_{19}H_{20}ClN_3O$ 341.1295, found 341.1300. $[M+H]^+$ observed.

HPLC purity 99.9%, 99.5% *er*.

$[\alpha]_D^{20}$(*c* = 0.125, MeOH) -211.2°.



BRD0209

(*S*)-3-Cyclopropyl-4,7,7-trimethyl-4-phenyl-2,4,6,7,8,9-hexahydro-5H-pyrazolo[3,4-*b*]quinolin-5-one (BRD0209).

Step 1: yield 44%.

Step 2: Method A, yield 65%.

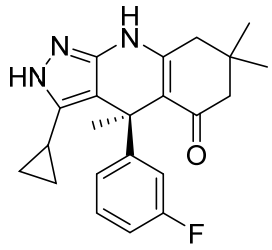
Chiral separation: Chiralpak-IC 90:10 A:B (A = 0.1% DEA in *n*-hexane, B = 1:1 CH_2Cl_2/MeOH).

^{1}H NMR (400 MHz, DMSO-d_6) δ 11.41 (s, 1H), 9.59 (s, 1H), 7.29 (d, *J* = 7.3 Hz, 2H), 7.15 (t, *J* = 7.7 Hz, 2H), 6.99 (t, *J* = 7.2 Hz, 1H), 2.40 (dd, *J* = 19.9, 16.5 Hz, 2H), 2.00 (d, *J* = 15.8 Hz, 1H), 1.94 (s, 3H), 1.87 (d, *J* = 15.8 Hz, 1H), 1.14 (tt, *J* = 8.4, 5.4 Hz, 1H), 0.99 (s, 3H), 0.95 (s, 3H), 0.72 (dtd, *J* = 12.8, 8.7, 7.6, 4.1 Hz, 1H), 0.45 (dq, *J* = 9.7, 5.5 Hz, 1H), 0.40 – 0.24 (m, 2H).

HRMS calcd for $C_{22}H_{26}N_3O$ 347.1998, found 347.2001. $[M+H]^+$ observed.

HPLC purity 99.4%, >99.9% *er*.

$[\alpha]_D^{20}$(*c* = 0.25, MeOH) -176.7°.



(*S*)-3-Cyclopropyl-4-(3-fluorophenyl)-4,7,7-trimethyl-2,4,6,7,8,9-hexahydro-5H-pyrazolo[3,4-*b*]quinolin-5-one (BRD0320).

Step 1: yield 35%.

Step 2: Method B, yield 61%.

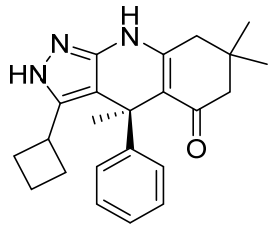
Chiral separation: Chiralpak-ADH 85:15 A:B (A = 0.1% DEA in *n*-hexane, B = EtOH).

^{1}H NMR (400 MHz, DMSO-d6): δ 11.48 (s, 1H), 9.67 (s, 1H), 7.23-7.13 (m, 1H), 7.10 (d, *J* = 7.9 Hz, 1H), 7.03 (dt , *J* = 11.2, 2.1 Hz, 1H), 6.85-6.79 (m, 1H), 2.41 (s, 2H), 2.04-1.98 (m, 1H), 1.91 (s, 3H), 1.90-1.88 (m, 1H), 1.20- 1.17 (m, 1H), 0.98 (s, 3H), 0.95 (s, 3H), 0.79-0.70 (m, 1H), 0.50-0.45 (m, 1H), 0.39-0.31 (m, 1H), 0.30-0.25 (m, 1H).

HRMS calcd for $C_{22}H_{25}FN_3O$ 365.1903, found 365.1907. $[M+H]^+$ observed.

HPLC purity 99.9%, 99.3% *er*.

$[\alpha]_D^{20}$(*c* = 0.125, MeOH) -275.5°.



(*S*)-3-Cyclobutyl-4,7,7-trimethyl-4-phenyl-2,4,6,7,8,9-hexahydro-5H-pyrazolo[3,4-*b*]quinolin-5-one (4).

Step 1: yield 21%.

Step 2: Method A, yield 55%.

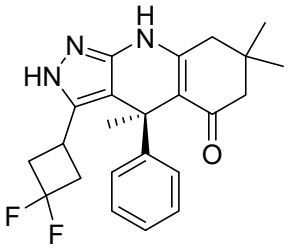
Chiral separation: Chiralpak-IC 90:10 A:B (A = 0.1% DEA in *n*-hexane, B = 1:1 CH_2Cl_2/MeOH).

^{1}HNMR (400 MHz, CD_3OD) δ 7.35 -7.33 (m, 2H), 7.16 (t, *J* = 7.6 Hz, 2H), 7.02 (t, *J* = 8 Hz, 1H), 3.03-2.93 (m, 1H), 2.48 (d, *J* = 4 Hz, 2H), 2.17-2.06 (m, 3H), 2.01-1.97 (m, 1H), 1.75-1.62 (m, 3H), 1.30-1.23 (m, 1H), 1.07 (s, 3H), 1.03 (s, 3H).

HRMS calcd for $C_{23}H_{27}N_3O$ 361.2154, found 361.2159. $[M+H]^+$ observed.

HPLC purity 99.1%, 99.7% *er*.

$[\alpha]_D^{20}$(*c* = 0.125, MeOH) -181.0°.



(*S*)-3-(3,3-Difluorocyclobutyl)-4,7,7-trimethyl-4-phenyl-2,4,6,7,8,9-hexahydro-5H-pyrazolo[3,4-*b*]quinolin-5-one (5).

Step 1: yield 32%.

Step 2: Method A, yield 44%.

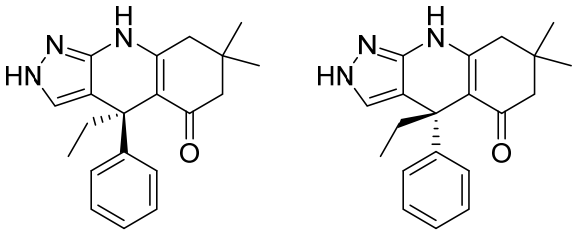
Chiral separation: Chiralpak-IC 90:10 A:B (A = 0.1% DEA in *n*-hexane, B = 1:1 CH_2Cl_2/MeOH).

^{1}H NMR ($CDCl_3$, 300 MHz) δ 7.84 (s, 1H), 7.35 (d, *J* = 9 Hz, 2H), 7.19 (m, 2H), 7.05 (t, 1H), 2.81 (m, 2H), 2.50 (m, 1H), 2.08 (m, 5H), 1.90 (s, 3H), 1.25 (m, 2H), 1.03 (s, 3H), 0.96 (s, 3H).

HRMS calcd for $C_{23}H_{25}F_2N_3O$ 397.1966, found 397.1970. $[M+H]^+$ observed.

HPLC purity 99.6%, 99.7% *er*.

$[\alpha]_D^{20}$(*c* = 0.25, MeOH) -109.7°.



BRD0705 **BRD5648**

(*S*)-4-Ethyl-7,7-dimethyl-4-phenyl-2,4,6,7,8,9-hexahydro-5H-pyrazolo[3,4-*b*]quinolin-5-one (BRD0705) and (*R*)-4-Ethyl-7,7-dimethyl-4-phenyl-2,4,6,7,8,9-hexahydro-5H-pyrazolo[3,4-*b*]quinolin-5-one (BRD5648)

Step 1: yield 51%.

Step 2: Method B, yield 62%.

Chiral separation: Chiralpak-IC 85:15 A:B (A = 0.1% DEA in *n*-hexane, B = 1:1 CH_2Cl_2/MeOH).

BRD0705:

^{1}HNMR (400 MHz, DMSO-d6) δ 11.90 (s, 1H), 9.62 (s, 1H), 7.28 (d, *J* = 7.4 Hz, 2H), 7.15 (t, *J* = 7.1 Hz, 2H), 7.05 (s, 1H), 7.00-6.97 (m, 1H), 2.92-2.88 (m, 1H), 2.43 (d, *J* = 16.3 Hz, 2H), 2.06-1.97 (m, 3H), 1.04 (s, 3H), 1.02 (s, 3H), 0.65 (t, *J* = 7.5Hz, 3H).

HRMS calcd for $C_{20}H_{23}N_3O$ 321.1841, found 321.1842. $[M+H]^+$ observed.

HPLC purity 98.9%, >99.9% *er.*

$[\alpha]_D^{20}$(*c* = 0.125, MeOH) -45.0°.

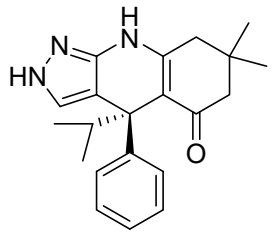
BRD5648:

^{1}HNMR (400 MHz, DMSO-d6) δ 11.90 (s, 1H), 9.62 (s, 1H), 7.28 (d, *J* = 7.4 Hz, 2H), 7.15 (t, *J* = 7.1 Hz, 2H), 7.05 (s, 1H), 7.00-6.97 (m, 1H), 2.92-2.88 (m, 1H), 2.43 (d, *J* = 16.3 Hz, 2H), 2.06-1.97 (m, 3H), 1.04 (s, 3H), 1.02 (s, 3H), 0.65 (t, *J* = 7.5Hz, 3H).

HRMS calcd for $C_{20}H_{23}N_3O$ 321.1841, found 321.1842. $[M+H]^+$ observed.

HPLC purity 99.4%, 99.7% *er.*

$[\alpha]_D^{20}$(*c* = 0.125, MeOH) +38.3°.



6

(S)-4-Isopropyl-7,7-dimethyl-4-phenyl-2,4,6,7,8,9-hexahydro-5H-pyrazolo[3,4-b]quinolin-5-one (6).

Step 1: 71%

Step 2: Method B, 68%

Chiral separation: Chiralpak-AD-H 85:15 A:B (A = 0.1% DEA in *n*-hexane, B = EtOH).

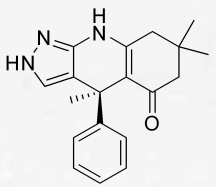
^{1}HNMR (400 MHz, DMSO-d6): δ 11.98 (s, 1H), 9.61 (s, 1H), 7.22 (d, *J* = 7.6 Hz, 2H), 7.09 (t, *J* = 7.2 Hz, 2H), 6.94 (t, *J* = 7.2 Hz, 1H), 6.90 (s, 1H), 3.59 (hept, *J* = 6.8 Hz, 1H), 2.37 (app s, 2H), 1.94, 1.83 (ABq, *J* = 16.0 Hz, 2H), 0.98 (s, 3H), 0.93 (d, *J* = 6.8 Hz, 3H), 0.89 (s, 3H), 0.67 (d, *J* = 6.8 Hz, 3H).

MS calcd for $C_{21}H_{25}N_3O$ 335.1998, found 336.2070. $[M+H]^+$ observed.

HPLC purity 98.9%, 98.6% *er*.

$[\alpha]_D^{20}$(*c* = 0.125, MeOH) -221.8°.

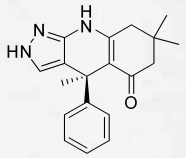
^{1}HNMR and LCMS data



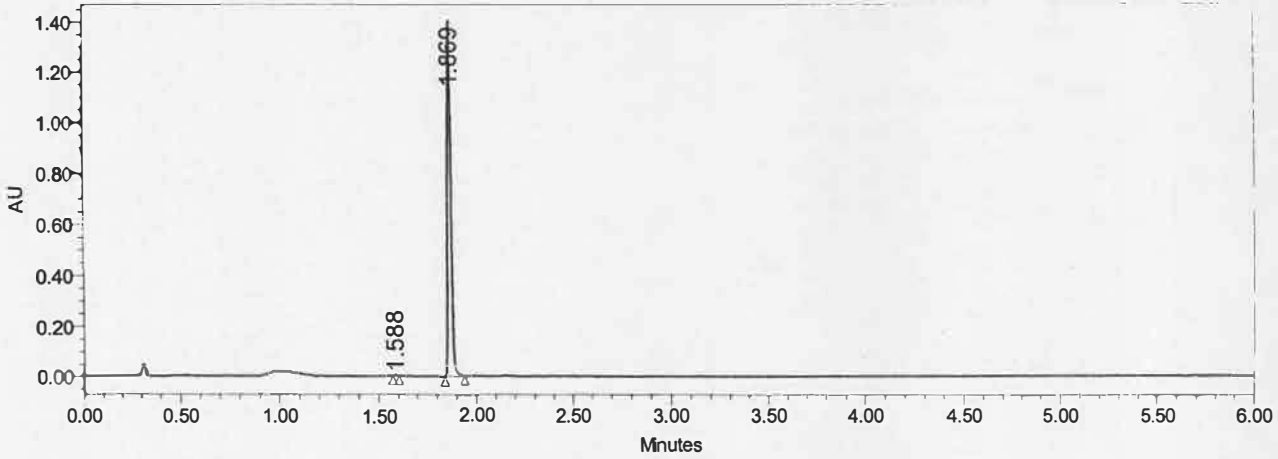
1

Sample Name:	**SBF-MA1307-076-Fr-I # IP13090065**	Acquired By:	System .
Vial:	2:B,7	Acq. Method Set:	PDA _METH_2A
Injection Volume:	0.50 ul	Proc. Chnl. Descr.:	**PDA MaxPlot (190.0 nm to 800.0**
Run Time:	6.0 Minutes	Date Acquired:	9/3/2013 5:49:19 PM IST
Project Name: SAPL_UNIT-2_AMCL_ALC-13_SEP-13			

Column : Acquity BEH C-18 (50 x2.1mm,1.7µ,)
Column Temp : 25℃
Mobile Phase A : Acetonitrile
Mobile Phase B : 0.025% TFA (Aq)
Flow Rate : 0.50 mL/Min
Time/% B : 0/90,0.5/90,3/10,6/10
Diluent : ACN:Water

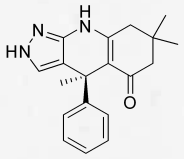


1

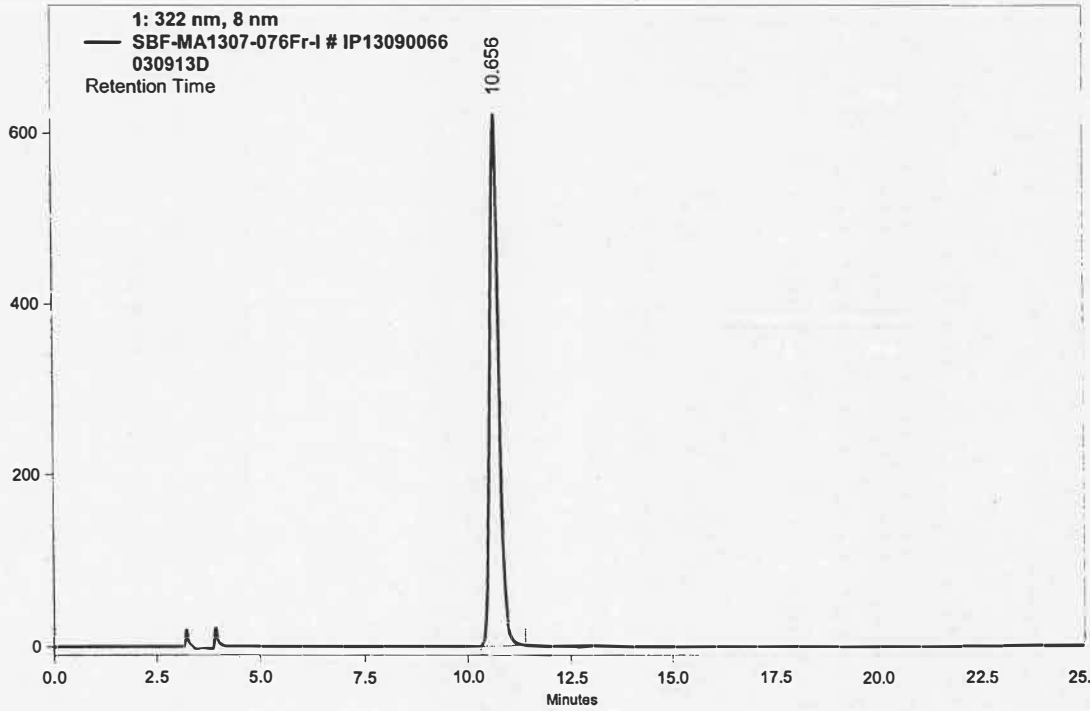


	RT	Area	% Area
1	1.59	2625	0.16
2	1.87	1658635	99.84

Sample Name : SBF-MA1307-076Fr-I # IP13090066
User Name :KSN
Vial No : 10076
Injection volume : 10
Method Name : C:\CLASS-VP\Methods\CHIRAL5.met
Data File Name : D:\D Drv\Data\A LC 02\SEPT-2013\030913D 9/3/2013 6:02:37 PM
Sample Description : Column :: Chiral Pak IC (250 x 4.6mm,5µm)
Mobile Phase A : 0.1%DEA in n-Hexane
Mobile Phase B : DCM : CH3OH(50:50)
A : B ::85:15
Flow Rate : 1.0 ml/min.



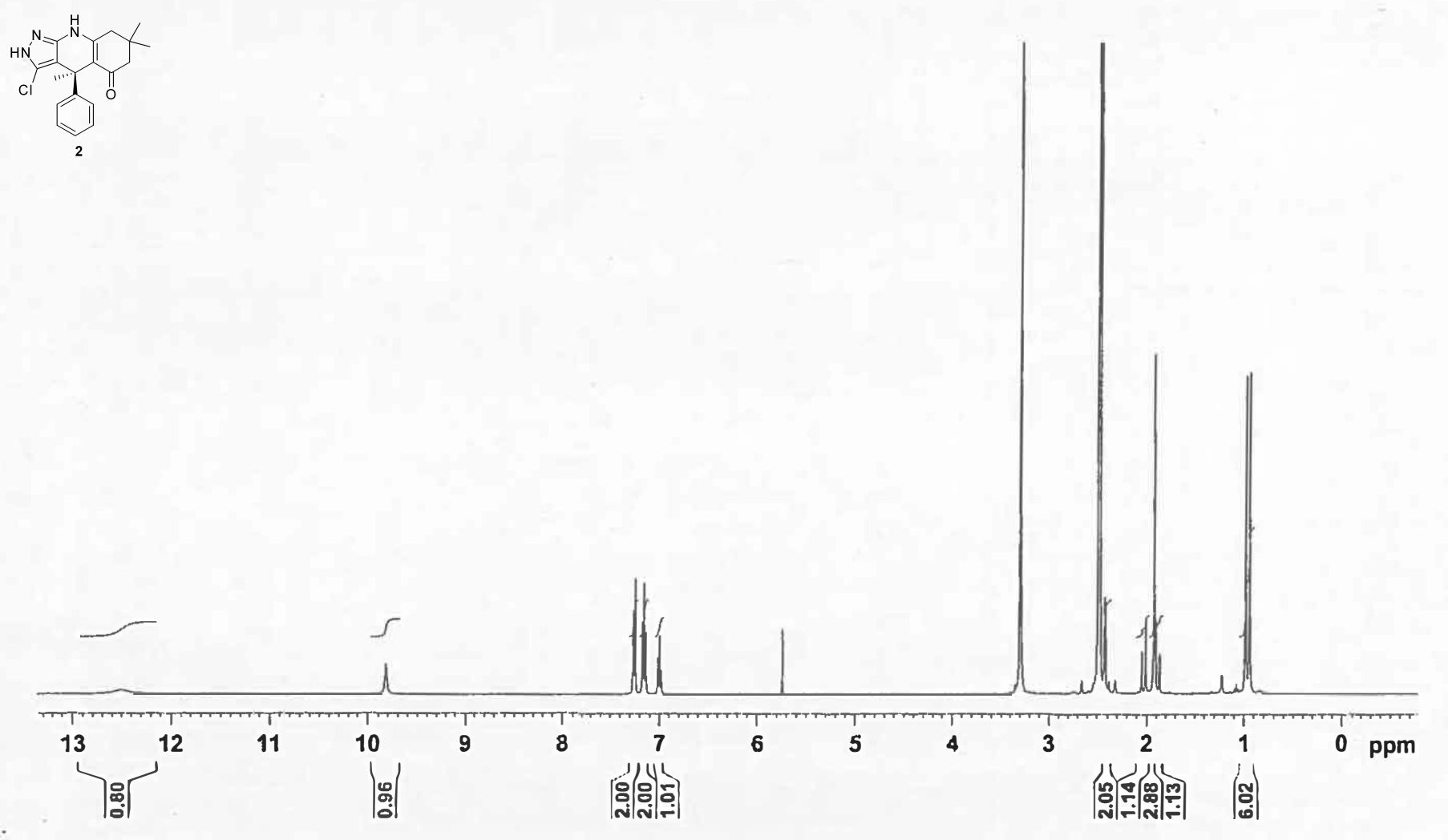
1



1: 322 nm, 8 nm

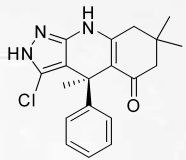
Pk #	Retention Time	Area	Area Percent
1	10.656	9362149	100.00

Totals			
		9362149	100.00

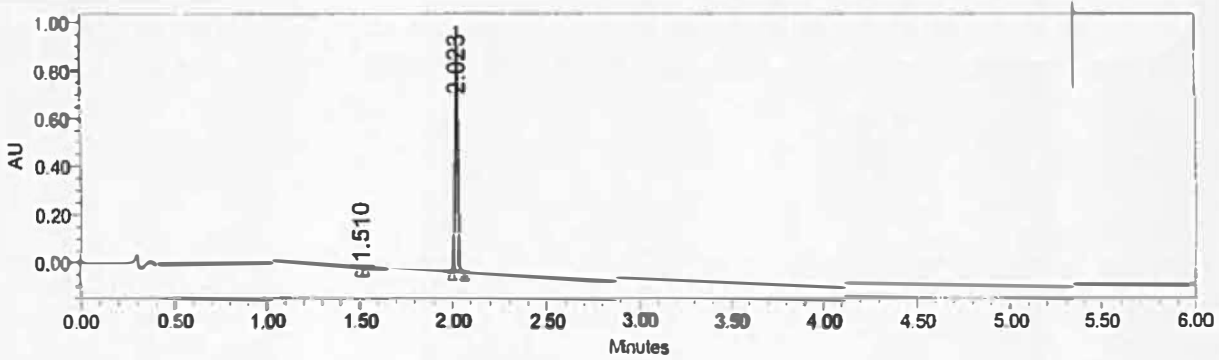

HN
N
H
Cl
O
2
13
12
11
10
9
8
7
6
5
4
3
2
1
0
ppm
0.80
0.96
2.00
2.00
1.01
2.05
1.14
2.88
1.13
6.02

Sample Name:	TBGSK-070Fr-I # IP13100992	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	281013_2
Vial:	1:C,5	Acq. Method Set:	PDA_METH_2A
Injection #:	1	Proc. Chnl. Descr.:	PDA 210.0 nm
Injection Volume:	1.00 ul	Date Acquired:	10/31/2013 1:55:50 PM IST
Run Time:	6.0 Minutes		
Project Name:	SAPL_UNIT-2_AMCL_ALC-10-OCT-13		

Column: Acquity UPLC BEH C-18 (2.1 x50mm,1.7u)
Column Temp:25℃
Mobile Phase:A: Acetonitrile
Mobile Phase:B:0.025% Aq TFA
Flow:0.5ml/min
Gradient programe:
T/%B:0.01/90,0.5/90,3/10,6/10
Diluent: ACN:Water



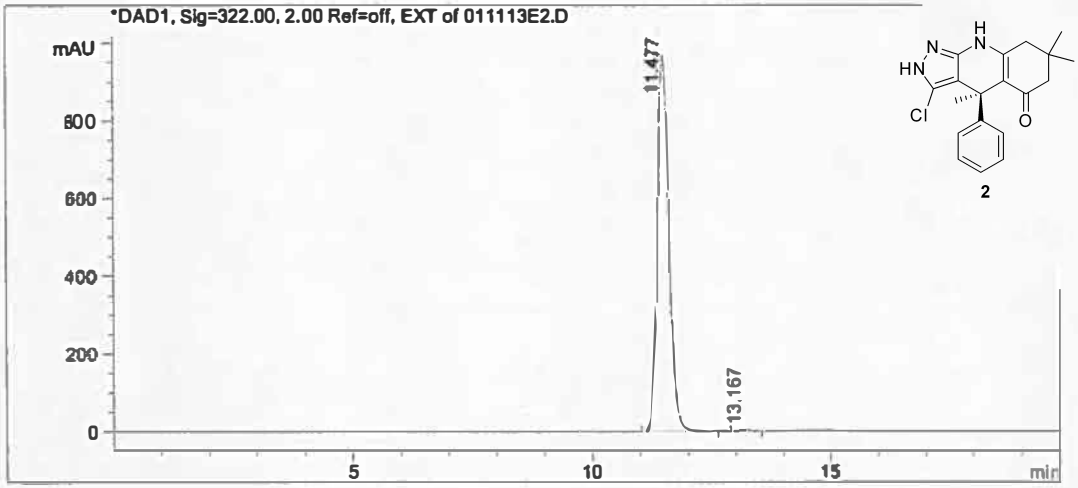
2



	RT	Area	% Area
1	1.51	904	0.10
2	2.02	942711	99.90

Data file : C:\CHEM32\1\DATA\NOV-2013\011113E2.D
Sample Name: TBGSK3-070Fr-I # IP13100993
Column : CHIRALPAK IC (250x4.6mm,5µm),
Mobile Phase A :0.1%DEA in n-Hexane.
Mobile Phase B :DCM:MeOH(80:20)
A:B :: 80 : 20.
Flow : 1.0ml/min

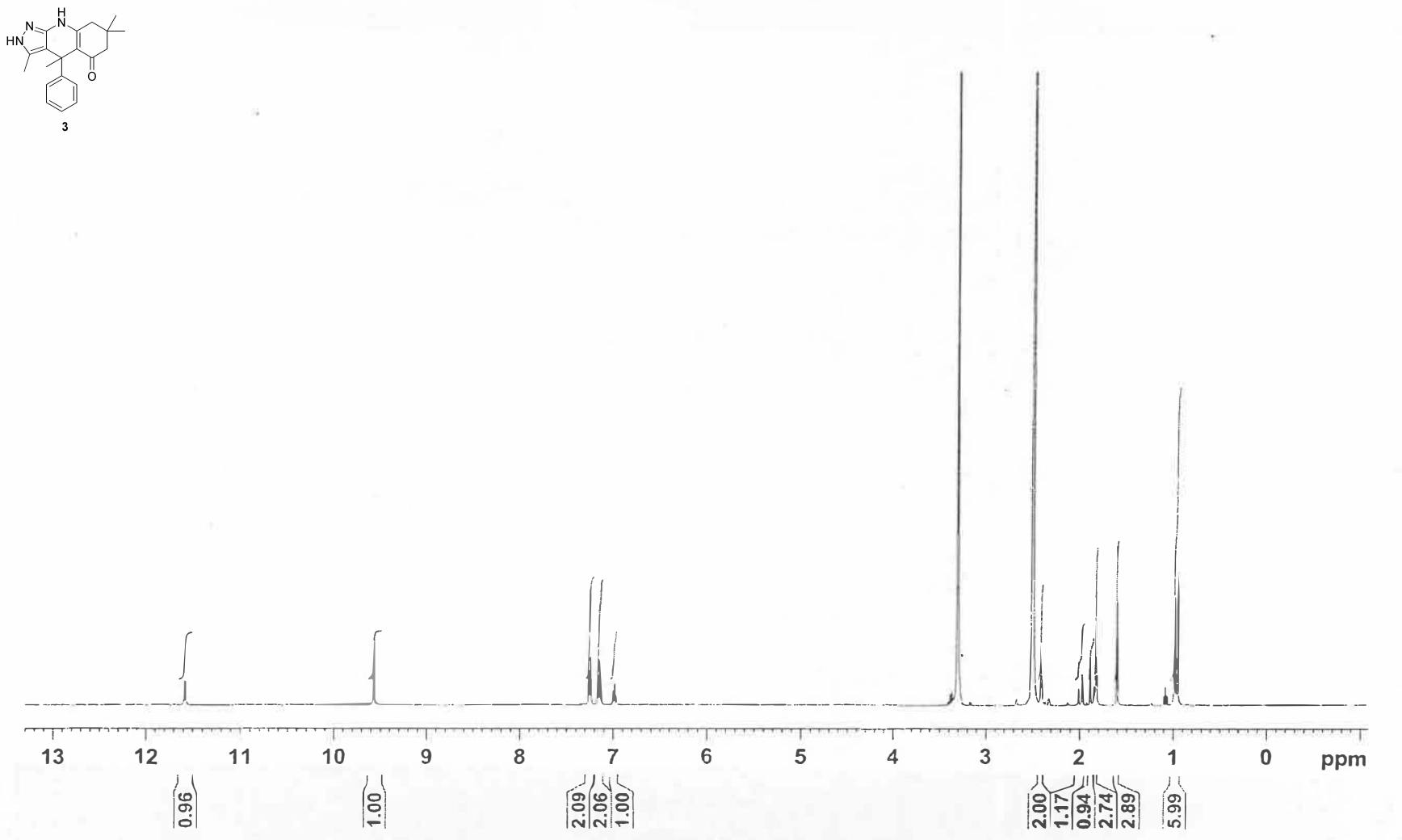
Injection Date	: Fri, 1. Nov. 2013	Location	: Vial 21
Sample Name	: TBGSK3-070Fr-I # IP13100993	Inj. No.	: 0
Acq Operator	: 4	Inj. Vol.	: 10 µl
Acq. Method	: C:\CHEM32\1\METHODS\CHIRAL.M		
Analysis Method	: C:\Chem32\1\DATA\SEPT-2013\290813 2013-09-20 18-31-0->		
Last Changed	: Fri, 25. Oct. 2013, 03:05:06 pm		



2

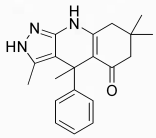
Signal 1: DAD1, Sig=322.00, 2.00 Ref=off, EXT

Peak #	RT [min]	Type	Width [min]	Area	Area %
1	11.477	MM	0.273	15903.705	99.489
2	13.167	MM	0.294	81.756	0.511

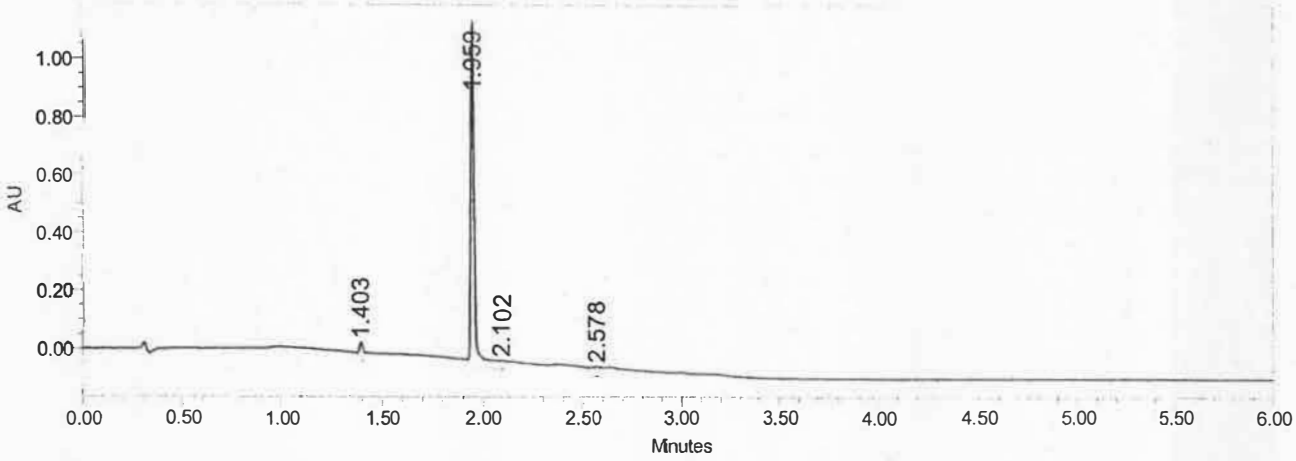

3
13
12
11
10
9
8
7
6
5
4
3
2
1
0
ppm
0.96
1.00
2.09
2.06
1.00
2.00
1.17
0.94
2.74
2.89
5.99

Sample Name:	**SBF-MA1309-009-Fr-I # IP13070823**	Acquired By:	System
Vial:	1:B,1	Acq. Method Set:	PDA _METH_2A
Injection Volume:	1.00 ul	Proc. Chnl. Descr.:	**PDA 210.0 nm**
Run Time:	6.0 Minutes	Date Acquired:	7/29/2013 12:15:43 PM IST
Project Name:	SAPL_UNIT-2_AMCL_ALC-13_JUL-13		

Column : Acquity BEH C-18 (50 x2.1mm,1.7µ,)
Column Temp : 25℃
Mobile Phase A : Acetonitrile
Mobile Phase B : 0.025% TFA (Aq)
Flow Rate : 0.50 mL/Min
Time/% B : 0/90,0.5/90,3/10,6/10
Diluent : ACN:Water

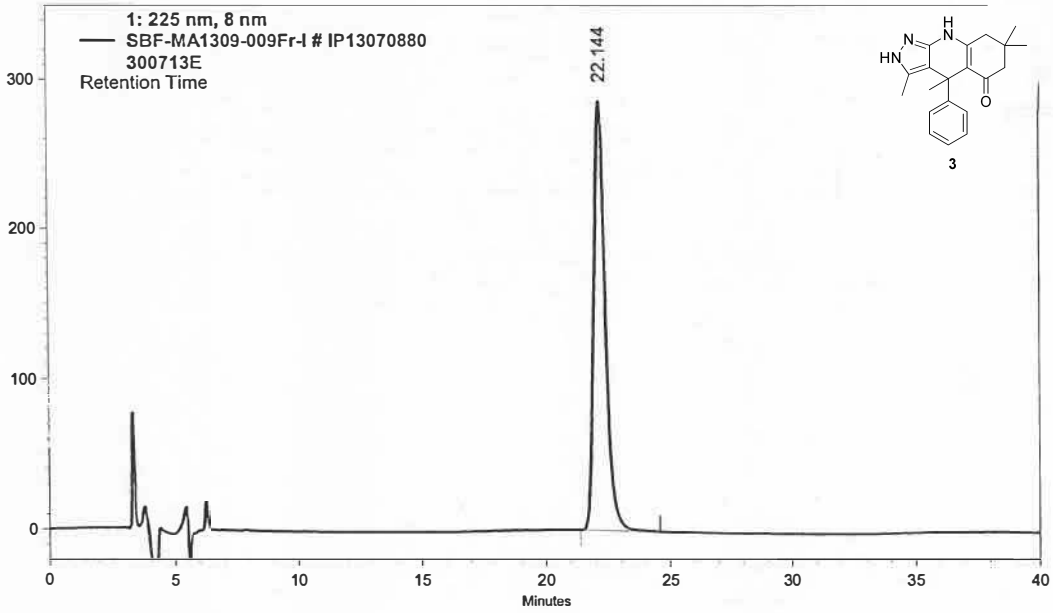


3



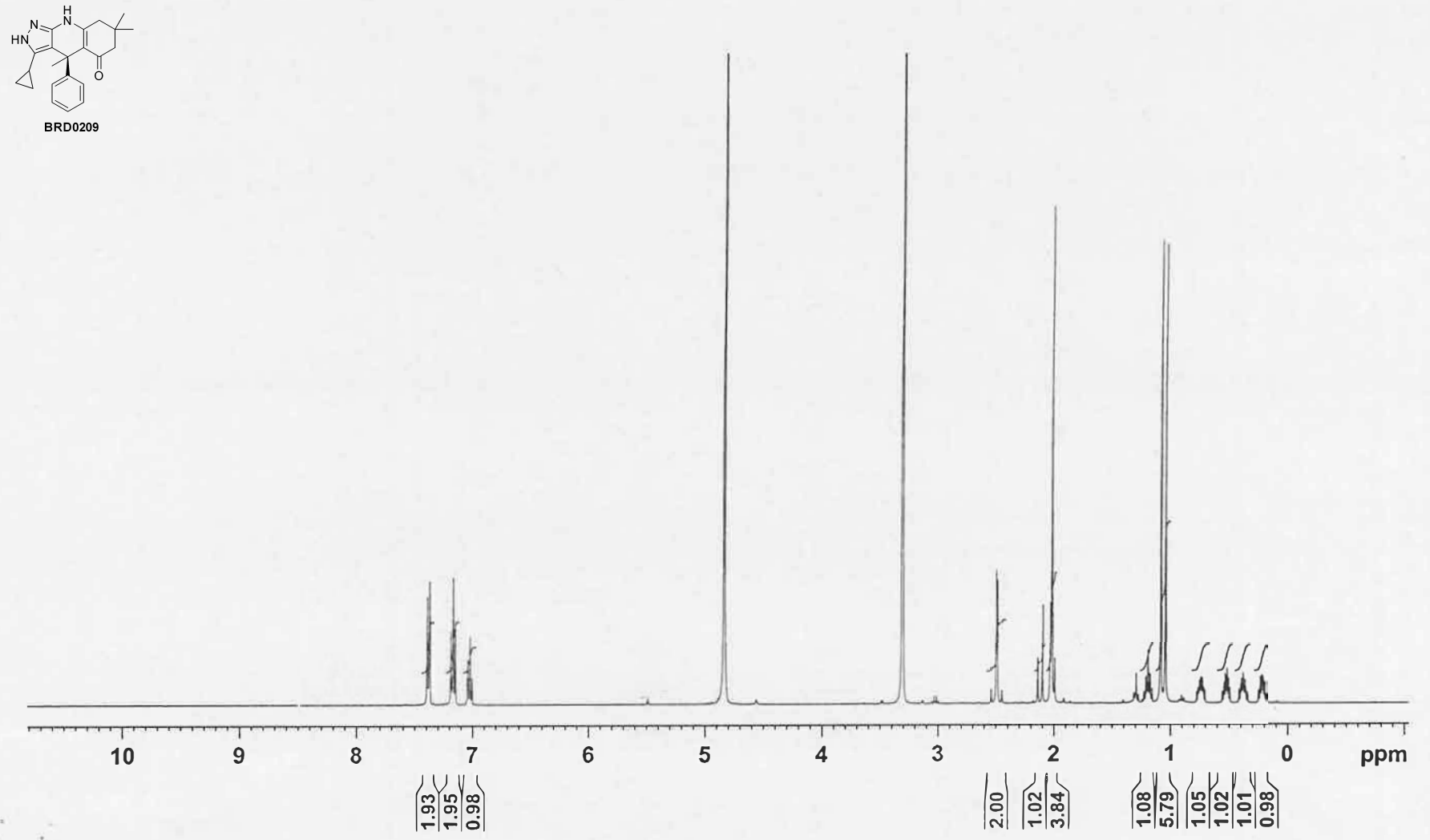
	RT	Area	% Area
1	1.40	32202	2.57
2	1.96	1216462	97.05
3	2.10	1866	0.15
4	2.58	2867	0.23

Sample Name : SBF-MA1309-009Fr-I # IP13070880
User Name : CSB
Vial No : 20016
Injection volume : 15
Method Name : C:\CLASS-VP\Methods\Chiral1.met
Data File Name : D:\D Drv\Data\A LC 02\JULY-2013\300713E 7/30/2013 6:33:44 PM
Sample Description : Column :CHIRALPAK- IC (250 x 4.6mm,5µm)
Mobile Phase A : 0.1%DEA in n-Hexane
Mobile Phase B :DCM:MeOH(50:50)
A : B :: 90:10
Flow Rate : 1.0 ml/min.



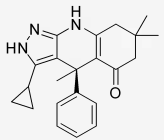
1: 225 nm, 8 nm

Pk #	Retention Time	Area	Area Percent
1	22.144	9092006	100.00
Totals		9092006	100.00

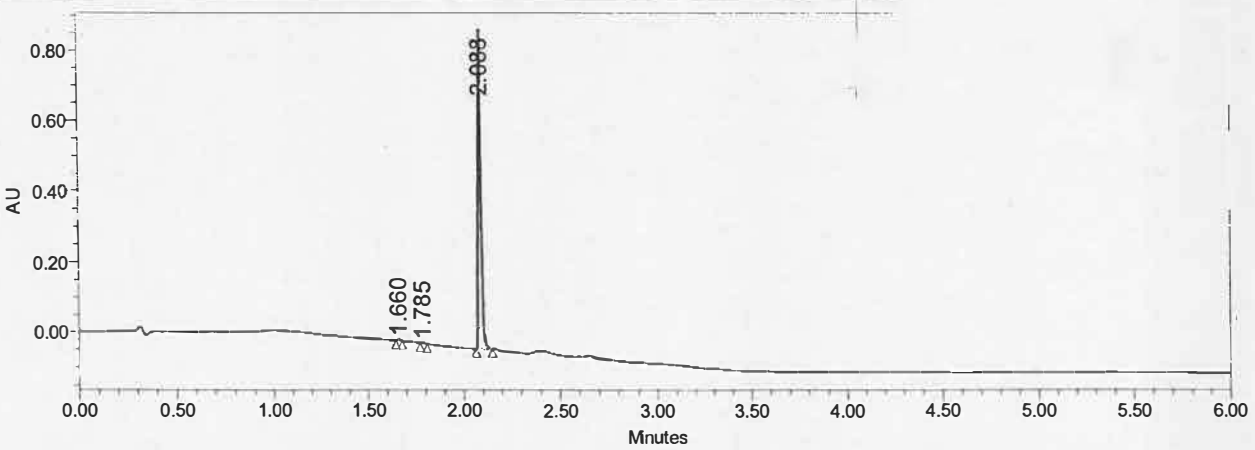

BRD0209
10
9
8
7
6
5
4
3
2
1
0
ppm
1.93
1.95
0.98
2.00
1.02
3.84
1.08
5.79
1.05
1.02
1.01
0.98

Sample Name:	**BRD-7079-Fr-I # IP13080229**	Acquired By:	System
Vial:	2:D,2	Acq. Method Set:	PDA _METH_2A
Injection Volume:	0.50 ul	Proc. Chnl. Descr.:	**PDA 210.0 nm**
Run Time:	6.0 Minutes	Date Acquired:	8/7/2013 8:41:11 PM IST
Project Name: SAPL_UNIT-2_AMCL_ALC-13_AUG-13			

Column : Acquity BEH C-18 (50 x2.1mm,1.7µ,)
Column Temp : 25℃
Mobile Phase A : Acetonitrile
Mobile Phase B : 0.025% TFA (Aq)
Flow Rate : 0.50 mL/Min
Time/% B : 0/90,0.5/90,3/10,6/10
Diluent : ACN:Water

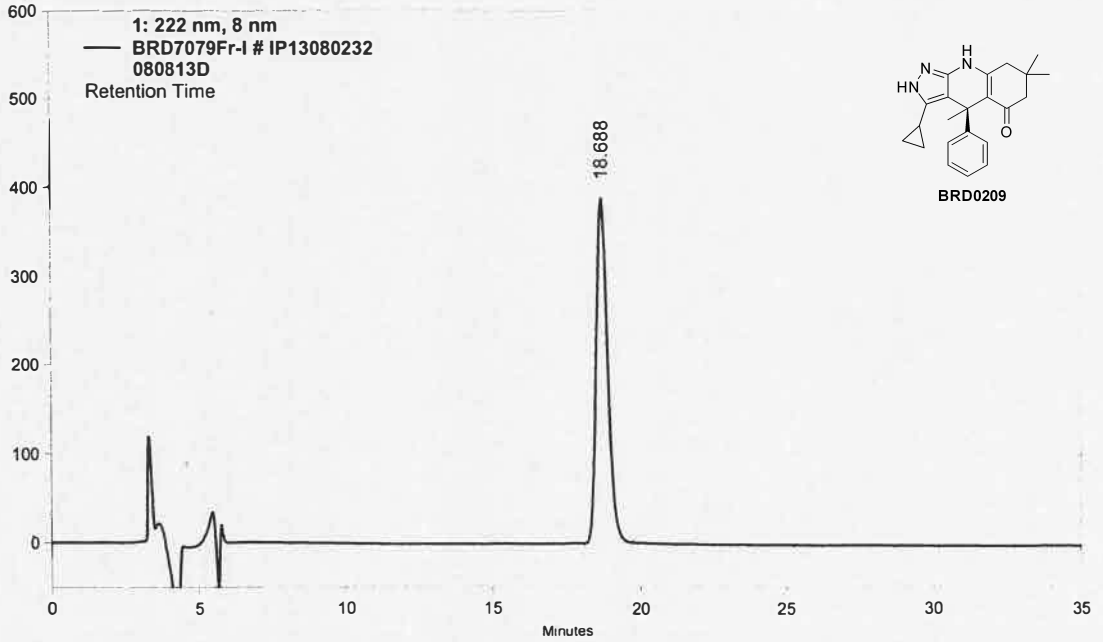


BRD0209



	RT	Area	% Area
1	1.66	4195	0.43
2	1.79	1477	0.15
3	2.09	960323	99.41

Sample Name : BRD7079Fr-I # IP13080232
User Name : KSN
Vial No : 10001
Injection volume : 10
Method Name : C:\CLASS-VP\Methods\Chiral1.met
Data File Name : D:\D Drv\Data\A LC 02\AUG-2013\080813D 8/8/2013 2:38:23 PM
Sample Description : Column : Cciral pak IC (250 x 4.6mm,5µm)
Mobile Phase A : 0.1%DEA in n-Hexane
Mobile Phase B :DCM:MEOH(50:50)
A : B :: 90:10
Flow Rate : 1.0 ml/min.

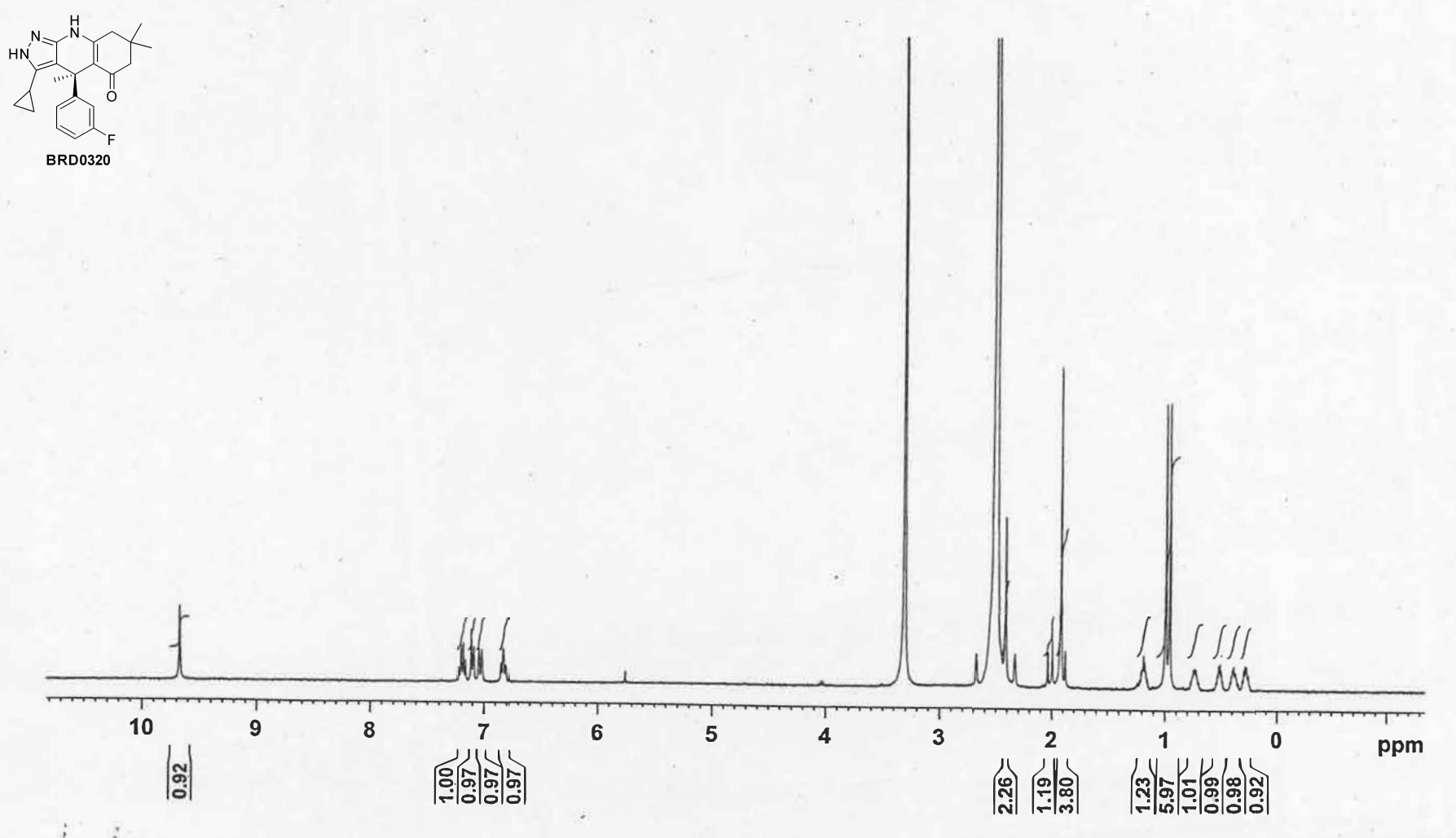


BRD0209

1: 222 nm, 8 nm

Pk #	Retention Time	Area	Area Percent
1	18.688	10373413	100.00

Totals			
		10373413	100.00


BRD0320
10
9
8
7
6
5
4
3
2
1
0
ppm
0.92
1.00
0.97
0.97
0.97
2.26
1.19
3.80
1.23
5.97
1.01
0.99
0.98
0.92

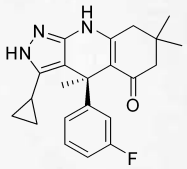
BRD0320

-116.80

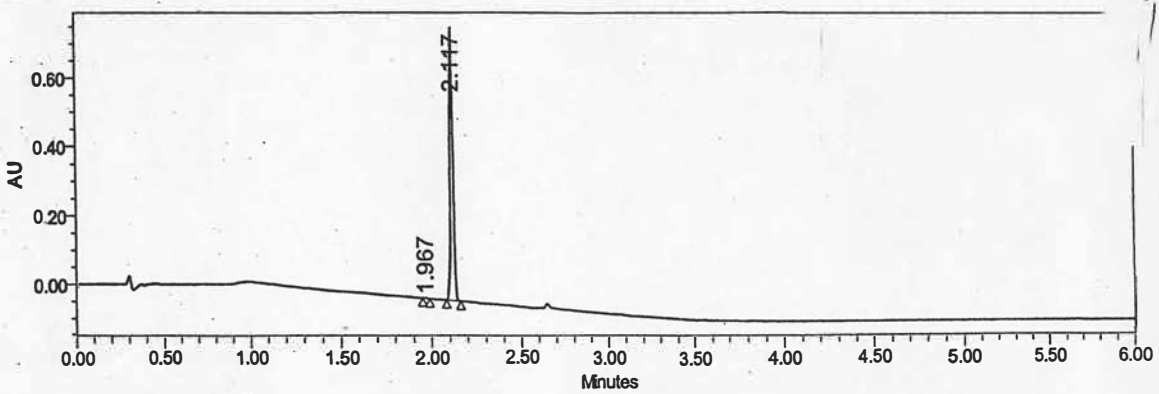
0 -50 -100 -150 -200 -250 ppm

Sample Name:	**SBF-MA1316-004-Fr-II # IP14010221**	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	070114_1
Vial:	1:E,3	Acq. Method Set:	PDA_METH_2A
Injection #:	1	Proc. Chnl. Descr.:	**PDA 210.0 nm**
Injection Volume:	0.50 ul	Date Acquired:	1/7/2014 9:17:42 PM IST
Run Time:	6.0 Minutes		
Project Name:	SAPL_UNIT-2_AMCL_ALC-10-JAN-14		

Column: Acquity UPLC BEH C-18 (2.1 x50mm,1.7u)
Column Temp:25℃
Mobile Phase:A: Acetonitrile
Mobile Phase:B:0.025% Aq TFA
Flow:0.5ml/min
Gradient programe:
T/%B:0.01/90,0.5/90,3/10,6/10
Diluent: ACN:Water



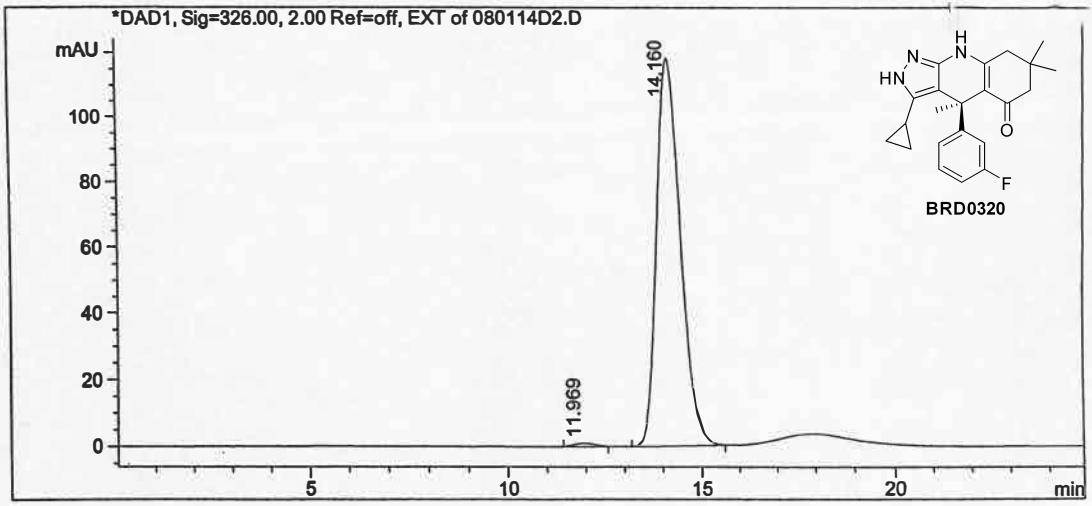
BRD0320



	RT	Area	% Area
1	1.97	1305	0.14
2	2.12	946364	99.86

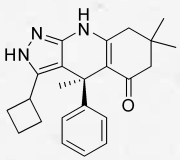
Column :Chiral Pak ADH(250x4.6mm,5µm),
Mobile Phase A : 0.1 %DEA in n- Hexane
Mobile Phase B : EtOH
A : B :85:15
Flow : 1.0ml/min.

Injection Date	: Wed, 8. Jan. 2014	Location :	Vial 2
Sample Name	:>SBF-MA1316-004Fr-II # IP14010228	Inj. No. :	
Acq Operator	: KSN	Inj. Vol. :	10 µl
Acq. Method	: C:\CHEM32\1\METHODS\CHIRAL.M		
Analysis Method	: C:\CHEM32\1\METHODS\CHIRAL.M		
Last Changed	: Fri, 3. Jan. 2014, 08:43:38 pm		

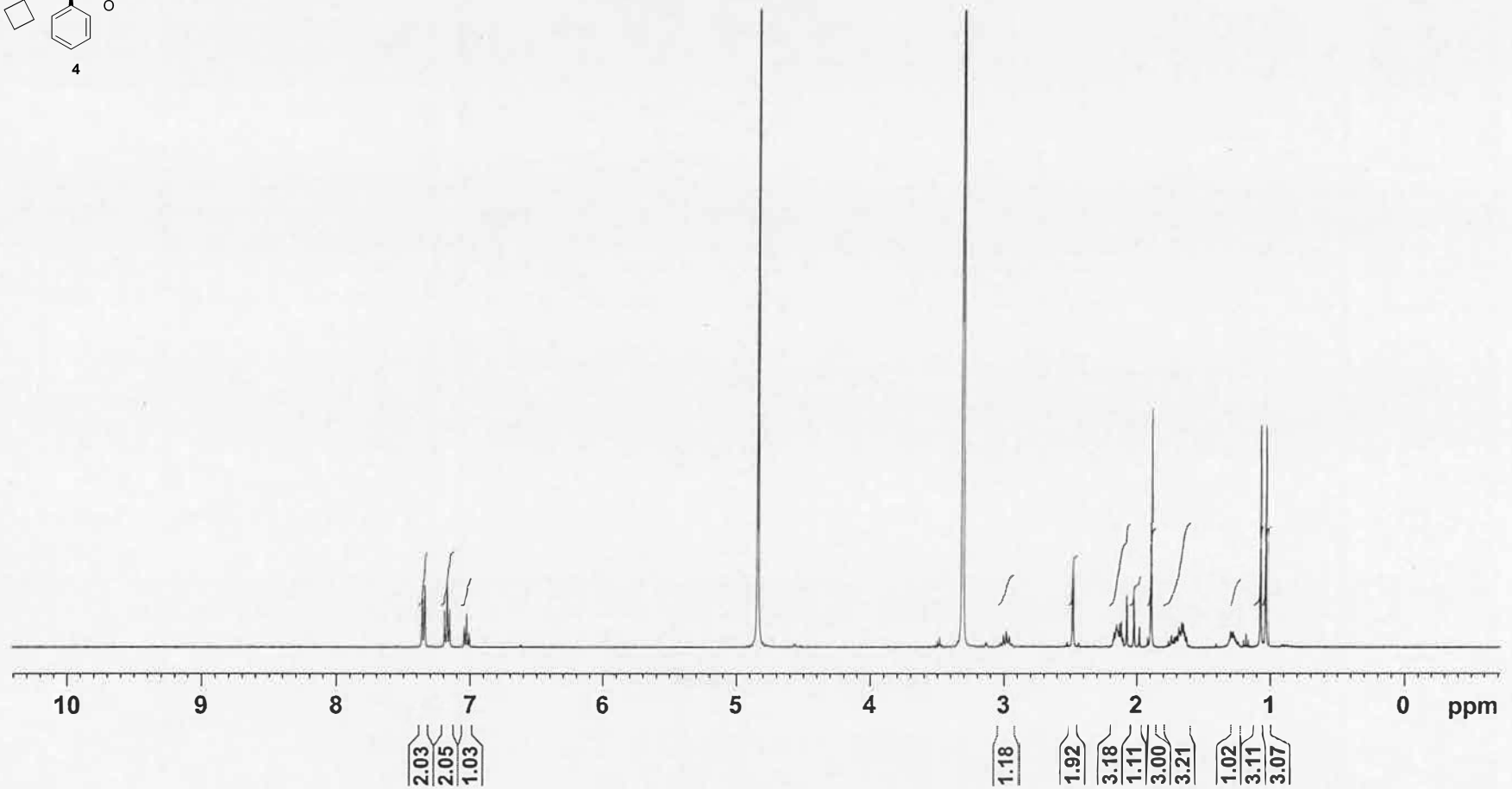


Signal 1: DAD1, Sig=326.00, 2.00 Ref=off, EXT

Peak #	RT [min]	Type	Width [min]	Area	Area %
1	11.969	MM	0.602	37.963	0.749
2	14.160	MM	0.709	5028.838	99.251

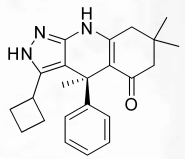

HN
N
H
N
O

4

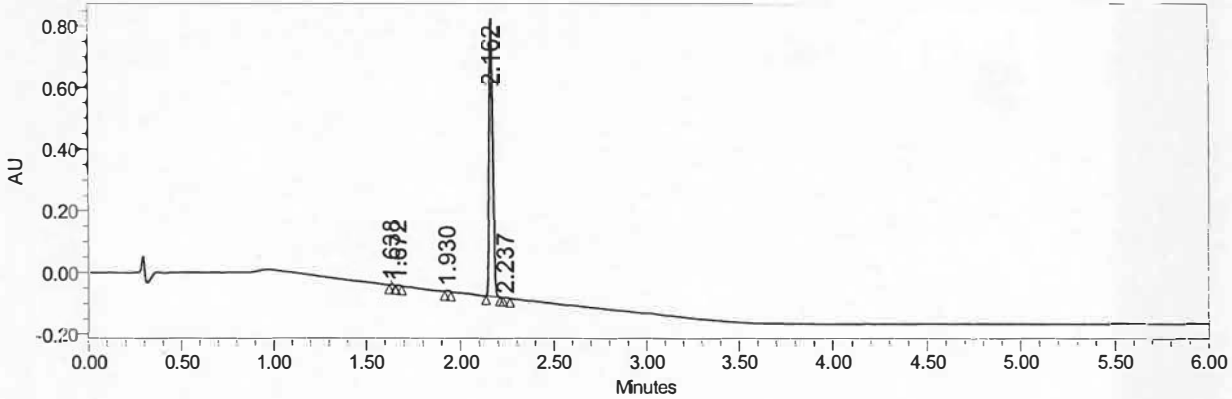

10
9
8
7
6
5
4
3
2
1
0
ppm
2.03
2.05
1.03
1.18
1.92
3.18
1.11
3.00
3.21
1.02
3.11
3.07

Sample Name:	**SBF-MA1309-091-Fr-I # IP13111011**	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	261113_1
Vial:	1:B,8	Acq. Method Set:	PDA_METH_2A
Injection #:	1	Proc. Chnl. Descr.:	**PDA 210.0 nm**
Injection Volume:	1.00 ul	Date Acquired:	11/26/2013 2:16:25 PM IST
Run Time:	6.0 Minutes		
Project Name:	SAPL_UNIT-2_AMCL_ALC-10-NOV-13		

Column: Acquity UPLC BEH C-18 {2.1 x50mm,1.7u}
Column Temp:25℃
Mobile Phase:A: Acetonitrile
Mobile Phase:B:0.025% Aq TFA
Flow:0.5ml/min
Gradient programe:
T/%B:0.01/90,0.5/90,3/10,6/10
Diluent: ACN:Water



4

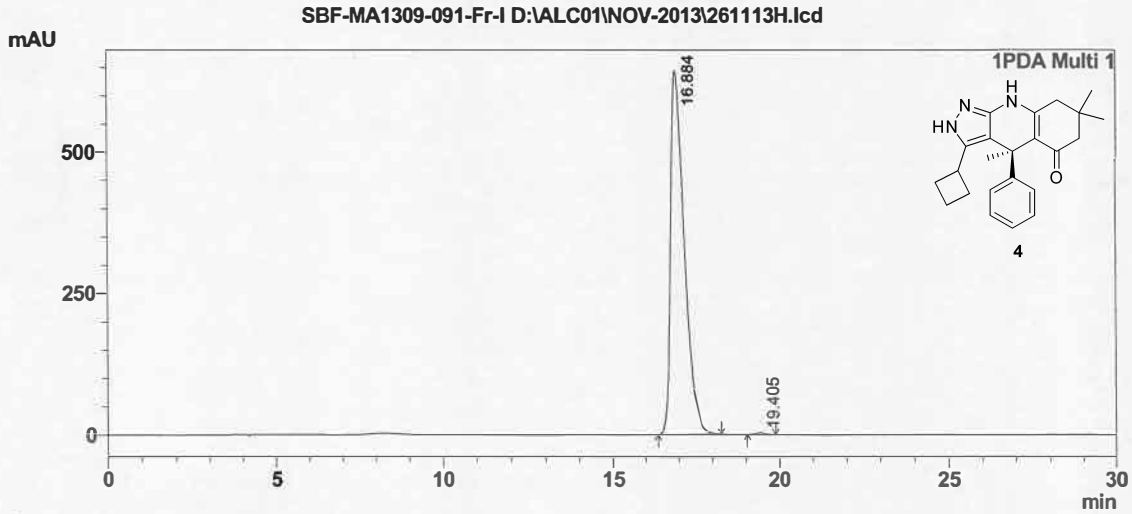


	RT	Area	% Area
1	1.64	1837	0.15
2	1.67	2896	0.24
3	1.93	4612	0.38
4	2.16	1190678	99.11
5	2.24	1391	0.12

D:\ALC01\NOV-2013\261113H.lcd

Acquired by	: CSB
Sample Name	: SBF-MA1309-091-Fr-I
Sample ID	: IP13111013
Vail #	: 34
Injection Volume	: 40 uL
Data File Name	: 261113H.lcd
Method File Name	: CHIRAL.lcm
Report File Name	: Default.lcr
Data Acquired	: 11/26/2013 5:23:02 PM

Description : Column: CHIRALPAK-IA (250 X 4.6mm, 5µm)
Mobile Phase A : 0.1% DEA in n-Hexane
Mobile Phase B : DCM : MeOH (50 : 50)
A : B :: 90 : 10.
Flowrate: 1.00 mL/min.

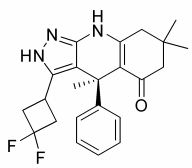


1 PDA Multi 1/328nm 4nm

PeakTable

PDA Ch1 328nm 4nm

Peak#	Ret. Time	Area	Height	Area %
1	16.884	19086398	644058	99.661
2	19.405	64924	2813	0.339
Total		19151322	646871	100.000



5

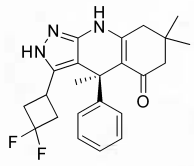
13 12 11 10 9 8 7 6 5 4 3 2 1 0 ppm

0.96 0.99 2.03 2.03 1.01 3.17 1.98 1.63 1.64 3.00 1.12 6.02

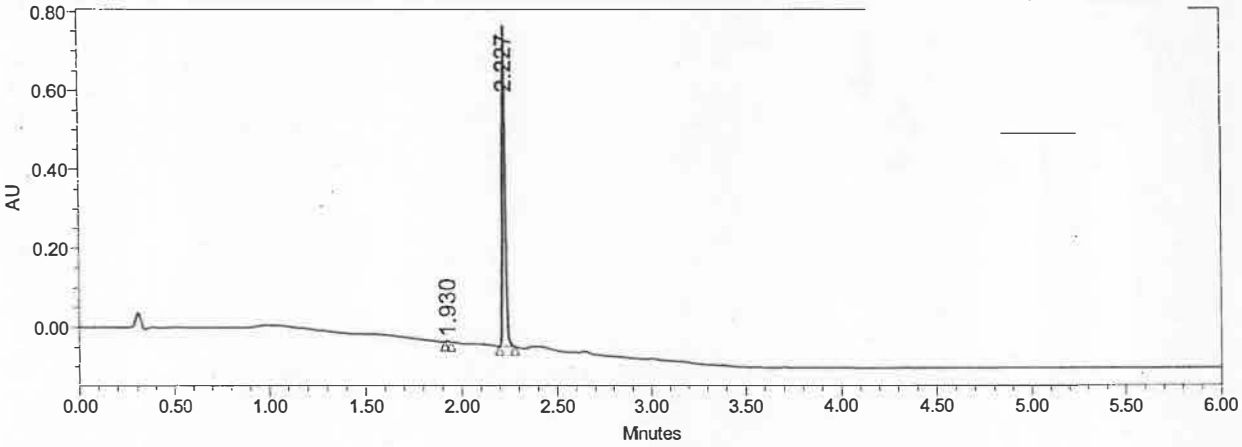
Sample Name:	**BRD-7625-Fr-I # IP13080166**	Acquired By:	System
Vial:	1:D,8	Acq. Method Set:	PDA _METH_2A
Injection Volume:	0.50 ul	Proc. Chnl. Descr.:	**PDA 210.0 nm**
Run Time:	6.0 Minutes	Date Acquired:	8/6/20137:19: 27 PM IST

Project Name: SAPL_UNIT-2_AMCL_ALC-13_AUG-13

Column : Acquity BEH C-18 (50 x2.1mm,1.7µ,)
Column Temp : 25℃
Mobile Phase A : Acetonitrile
Mobile Phase B : 0.025% TFA (Aq)
Flow Rate : 0.50 mL/Min
Time/% B : 0/90,0.5/90,3/10,6/10
Diluent : ACN:Water



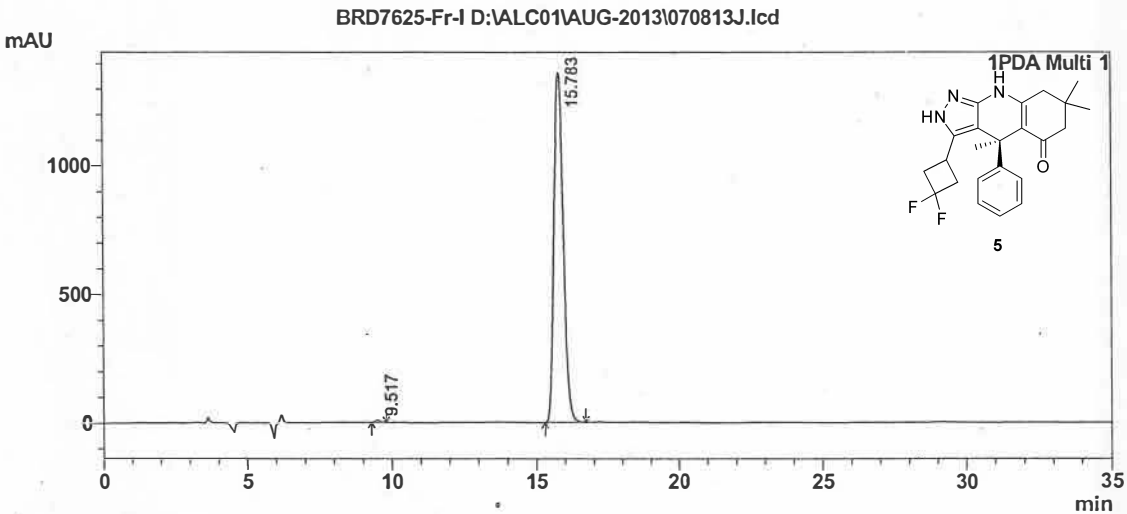
5



	RT	Area	% Area
1	1.93	3962	0.44
2	2.23	888506	99.56

D:\ALC01\AUG-2013\070813J.lcd

Acquired by : CSB
Sample Name : BRD7625-Fr-I
Sample ID : IP13080168
Vail # : 1
Injection Volume : 50 uL
Data File Name : 070813J.lcd
Method File Name : CHIRAL.lcm
Report File Name : Default.lcr
Data Acquired : 8/7/2013 6:22:06 PM
Description : Column : CHIRALPAK-IC (250x 4.6mm, 5µ)
Mobile Phase A : 0.1% DEA in n-Hexane
Mobile Phase B : DCM-CH3OH (50:50)
A : B :: 90 : 10.
Flow Rate : 1.0 mL/min.

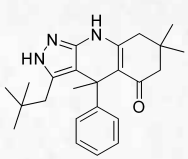


1 PDA Multi 1/225nm 4nm

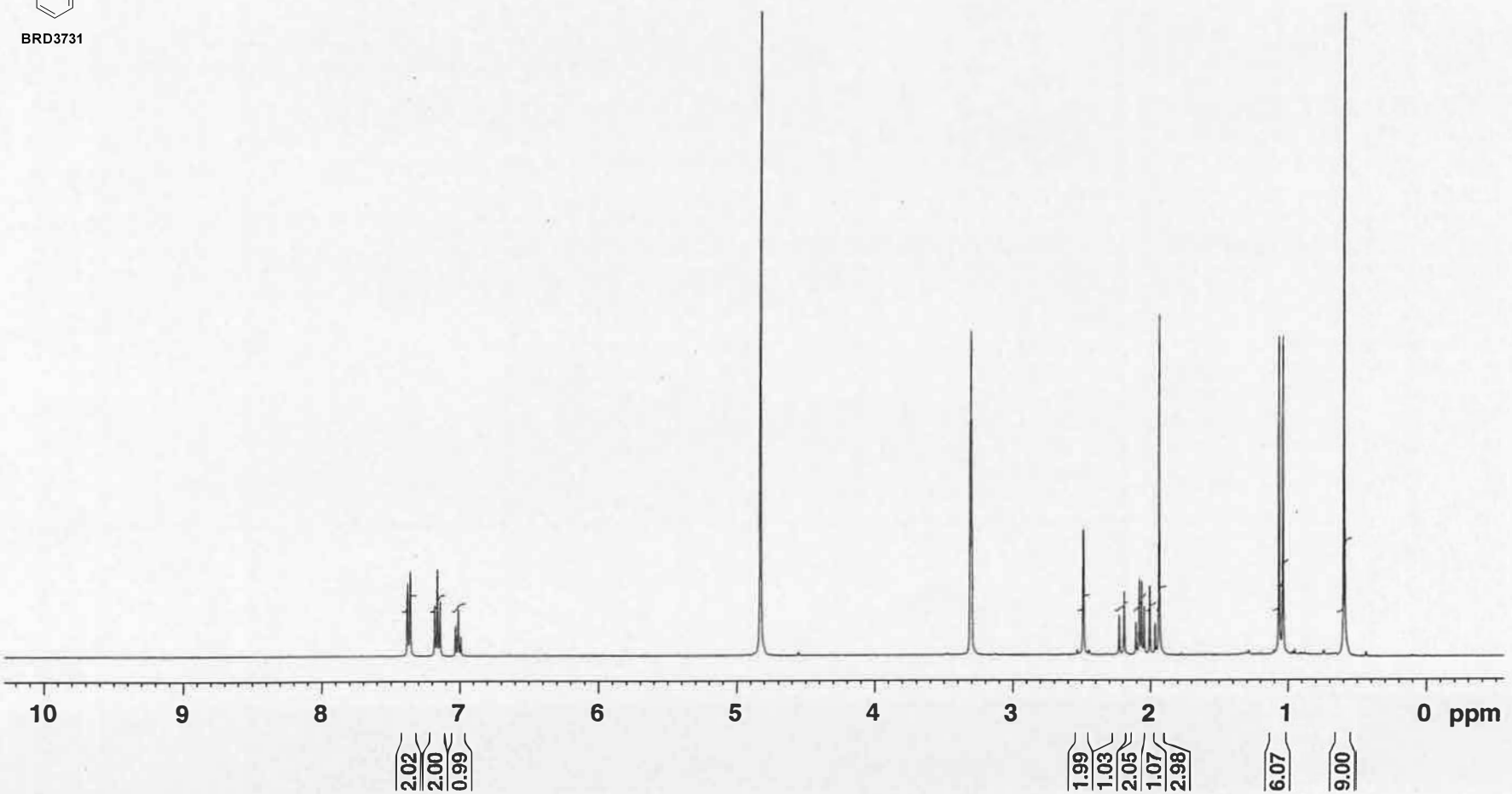
PeakTable

PDA Ch1 225nm 4nm

Peak#	Ret. Time	Area	Height	Area %
1	9.517	93202	8331	0.309
2	15.783	30069656	1361364	99.691
Total		30162858	1369695	100.000

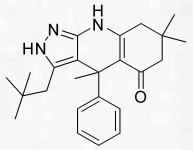


BRD3731

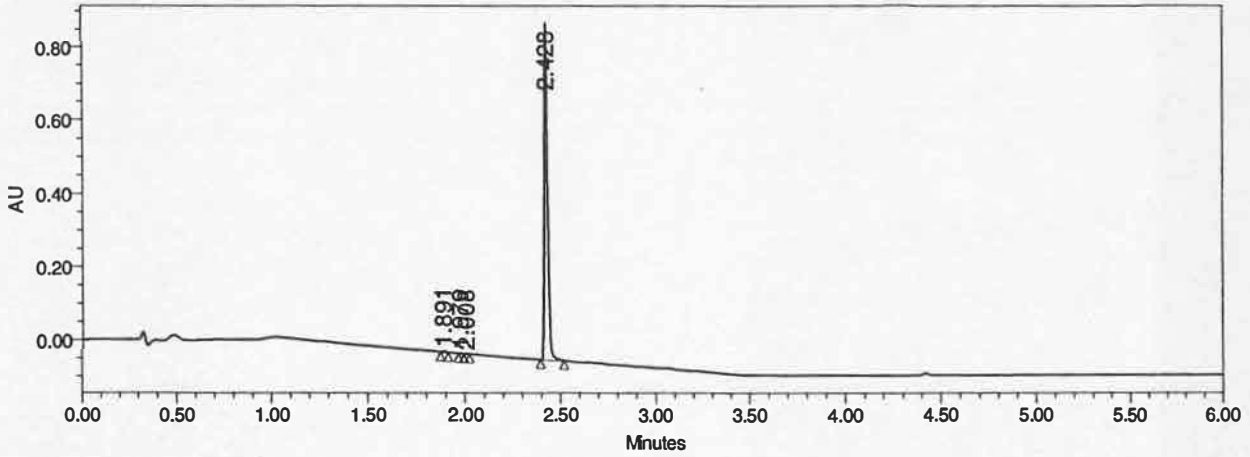


Sample Name:	**SBF-MA1410-019-Fr-I # IP14120169**	Acquired By:	System
Vial:	2:B,4	Acq. Method Set:	PDA_METH_2A
Injection Volume:	0.50 ul	Proc. Chnl. Descr.:	**PDA 210.0 nm**
Run Time:	6.0 Minutes	Date Acquired:	12/9/2014 5:17:32 PM IST
Project Name:	SAPL_UNIT-2_AMCL_ALC-13_DEC-14		

Column : Acquity UPLC BEH C-18 (50 x2.1mm,1.7µ,)
Column Temp : 25℃
Mobile Phase A : Acetonitrile
Mobile Phase B : 0.025% Aq.TFA
Flow Rate : 0.5 mL/Min
Time/% B : 0.01/90,0.5/90,3/10,6/10
Diluent : ACN:Water



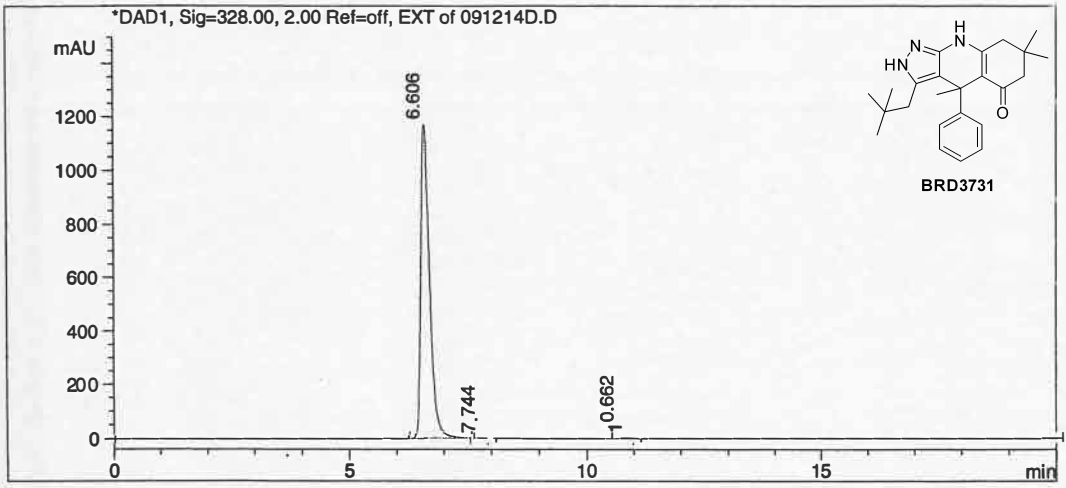
BRD3731



	RT	Area	% Area
1	1.89	2970	0.27
2	1.98	1055	0.10
3	2.01	1187	0.11
4	2.43	1101179	99.53

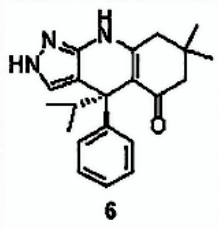
Data file : C:\CHEM32\1\DATA\DEC-2014\091214D.D
Column : Chiralpak IA (250 x 4.6mm x 5µm)
Mobil Phase A :0.1%DEA n-Hexane
Mobil Phase B : DCM : MeOH(50:50)
A : B ::80:20
Flow Rate : 1.0ml/min

Injection Date	: Tue, 9. Dec. 2014	Location	: Vial 2
Sample Name	: SBF-MA1410-19Fr-I # IP14120170		
Acq Operator	: KSN	Inj. Vol.	: 10 µl
Acq. Method	: C:\Chem32\1\METHODS\DEF_LC.M		
Analysis Method	: C:\Chem32\1\METHODS\DEF_LC.M		



Signal 1: DAD1, Sig=328.00, 2.00 Ref=off, EXT

Peak #	RT [min]	Area	Area %
1	6.606	1.513e4	99.700
2	7.744	11.110	0.073
3	10.662	34.404	0.227

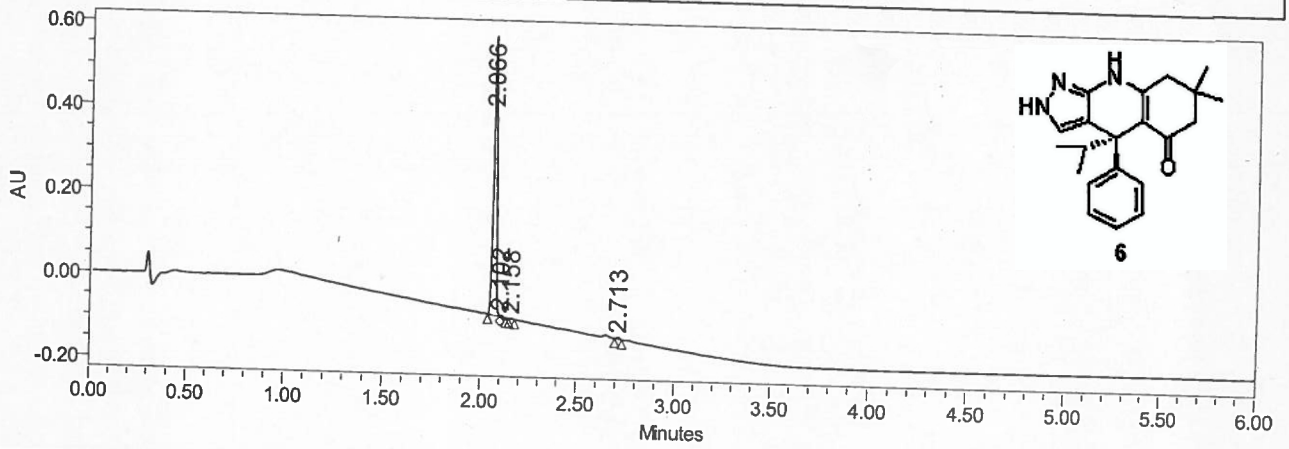

HN
N
H
O

6

13
12
11
10
9
8
7
6
5
4
3
2
1
0
ppm
0.89
0.91
1.95
1.99
2.00
1.07
1.97
1.00
0.97
2.97
3.07
2.94
2.92

Sample Name:	**BRD-2366-Fr-II # IP14010449**	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	150114_1
Vial:	1:B,2	Acq. Method Set:	PDA_METH_2A
Injection #:	1	Proc. Chnl. Descr.:	**PDA 210.0 nm**
Injection Volume:	0.50 ul	Date Acquired:	1/15/2014 3:19:01 PM IST
Run Time:	6.0 Minutes		
Project Name:	SAPL_UNIT-2_AMCL_ALC-10-JAN-14		

Column: Acquity UPLC BEH C-18 {2.1 x50mm,1.7u}
Column Temp:25℃
Mobile Phase:A: Acetonitrile
Mobile Phase:B:0.025% Aq TFA
Flow:0.5ml/min
Gradient programe:
T/%B:0.01/90,0.5/90,3/10,6/10
Diluent: ACN:Water

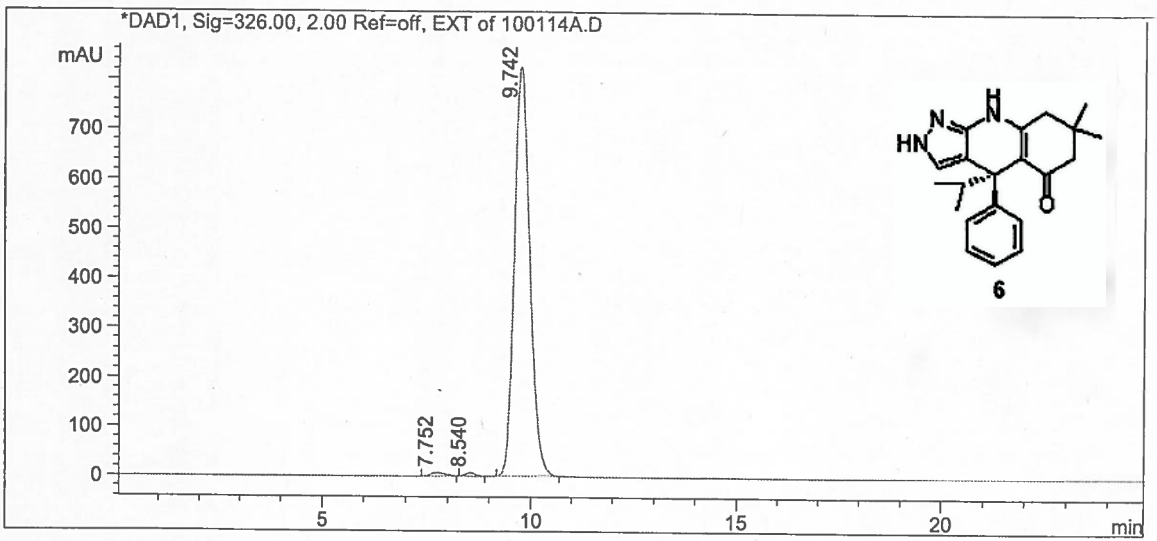


	RT	Area	% Area
1	2.07	813844	98.89
2	2.10	3232	0.39
3	2.16	1377	0.17
4	2.71	4537	0.55

Data File : C:\CHEM32\1\DATA\JAN-2014\100114A.D
Column :Chiralpak AD-H(250x4.6mm,5µm),
Mobile Phase A :0.1%DEA n- Hexane
Mobile Phase B :EtOH
A : B : 85:15
Flow : 1.0ml/min.

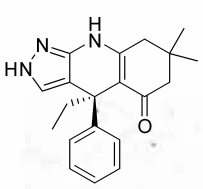
Injection Date : Fri, 10. Jan. 2014
Sample Name :>BRD2366Fr-II # IP14010367
Acq Operator : KSN
Acq. Method : C:\CHEM32\1\METHODS\CHIRAL.M
Analysis Method : C:\CHEM32\1\METHODS\CHIRAL.M
Last Changed : Thu, 9. Jan. 2014, 05:32:36 pm

Location : Vial 31
Inj. No. :
Inj. Vol. : 20 µl

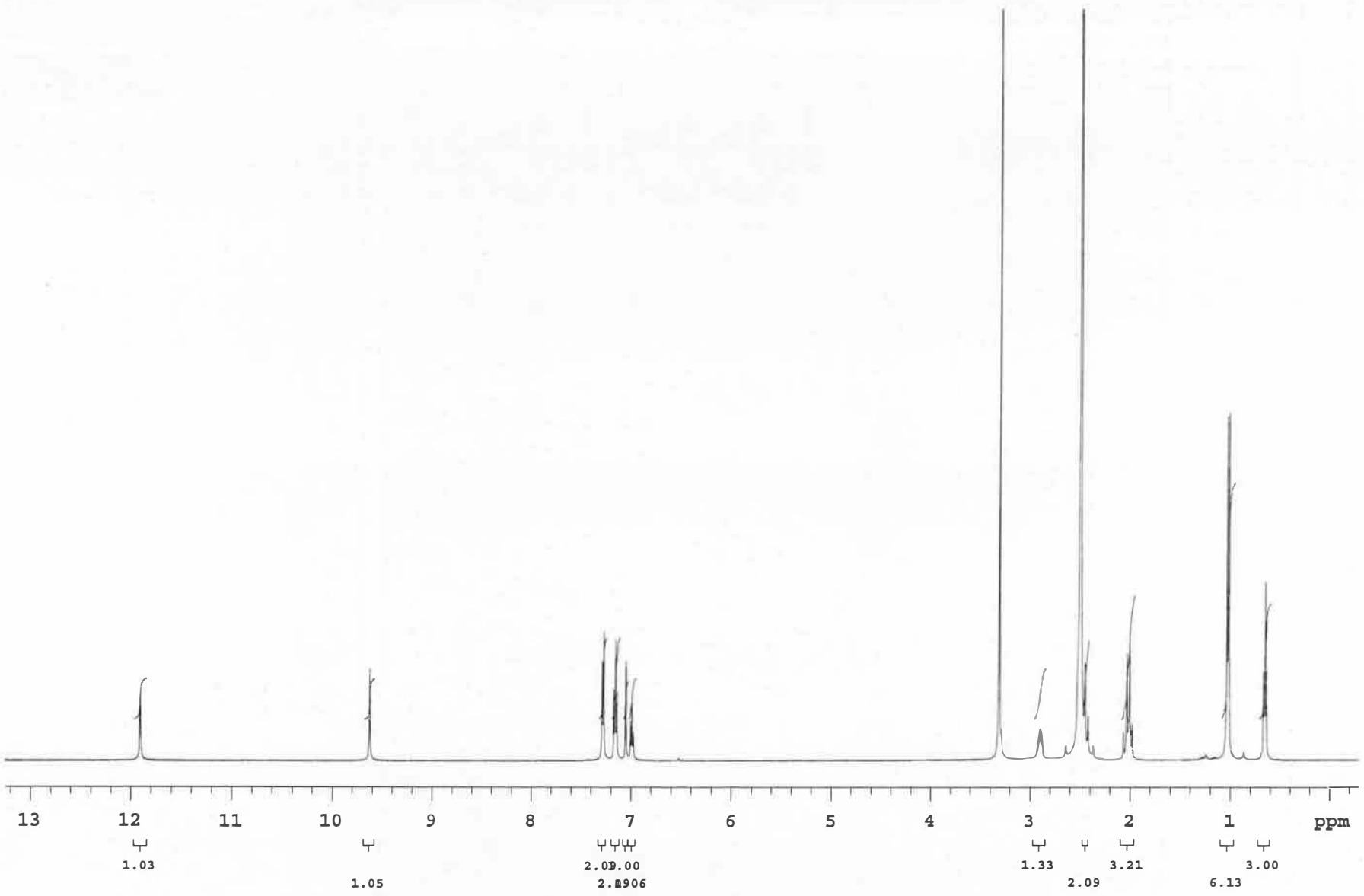


Signal 1: DAD1, Sig=326.00, 2.00 Ref=off, EXT

Peak #	RT [min]	Type	Width [min]	Area	Area %
1	7.752	MM	0.424	178.446	0.818
2	8.540	MM	0.320	136.992	0.628
3	9.742	MM	0.435	21510.779	98.555

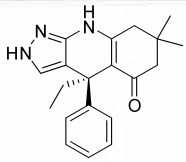


BRD0705

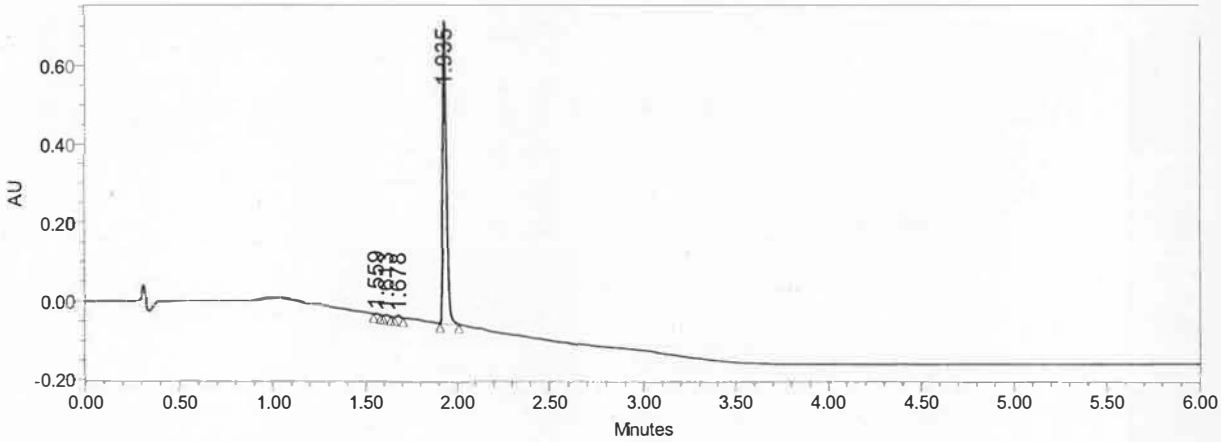

13
12
11
10
9
8
7
6
5
4
3
2
1
ppm
1.03
1.05
2.03
3.00
2.09
1.33
2.09
3.21
6.13
3.00

Sample Name:	**SBF-MA1307-090-Fr-I # IP13100449**	Acquired By:	System
Vial:	1:C,5	Acq. Method Set:	PDA _METH_2A
Injection Volume:	1.00 ul	Proc. Chnl. Descr.:	**PDA 210.0 nm**
Run Time:	6.0 Minutes	Date Acquired:	10/17/2013 3:31:21 PM IST
Project Name:	SAPL_UNIT-2_AMCL_ALC-13_OCT-13		

Column : Acquity BEH C-18 (50 x2.1mm,1.7µ,)
Column Temp : 25℃
Mobile Phase A : Acetonitrile
Mobile Phase B : 0.025% TFA (Aq)
Flow Rate : 0.50 mL/Min
Time/% B : 0/90,0.5/90,3/10,6/10
Diluent : ACN:Water



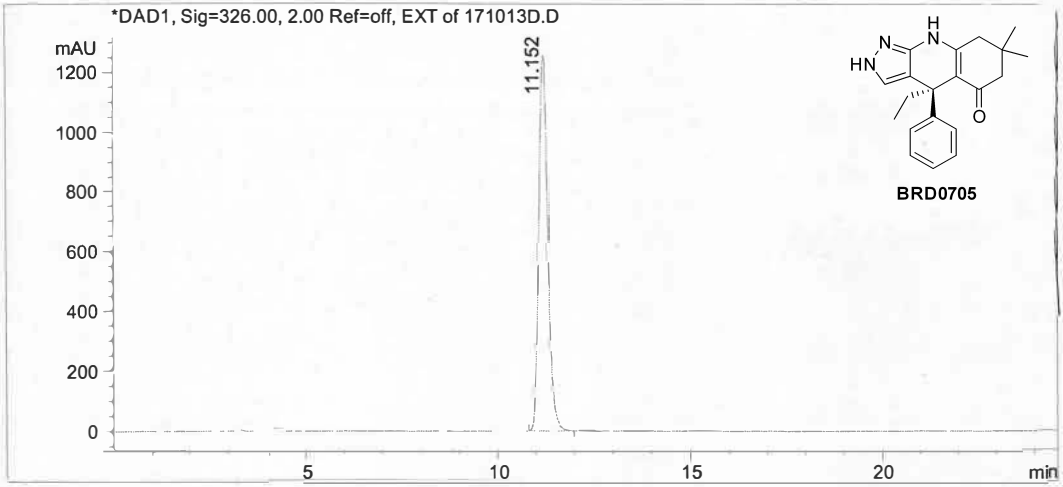
BRD0705



	RT	Area	% Area
1	1.56	2411	0.22
2	1.61	3106	0.29
3	1.68	6801	0.63
4	1.93	1069142	98.86

Data file : C:\CHEM32\1\DATA\OCT-2013\171013D.D
Sample Name: SBF-MA1307-090Fr-I # IP13100448
Column:Chiralpak IC (250x4.6mm,5µm),
Mobile Phase A :0.1%DEA in n hexane
Mobile Phase B : DCM : MeOH(50:50)
A: B: 85 : 15
Flow : 1.0ml/min

Injection Date	: Thu, 17. Oct. 2013		Location	:	Vial 65
Sample Name	: SBF-MA1307-090Fr-I #	->	Inj. No.	:	0
Acq Operator	: KSN		Inj. Vol.	:	20 µl
Acq. Method	: C:\Chem32\1\DATA\SEPT-2013\290813 2013-09-20 18-31-0->				
Analysis Method	: C:\Chem32\1\DATA\SEPT-2013\290813 2013-09-20 18-31-0->				
Last Changed	: Thu, 17. Oct. 2013, 05:48:10 pm (modified after loading)				

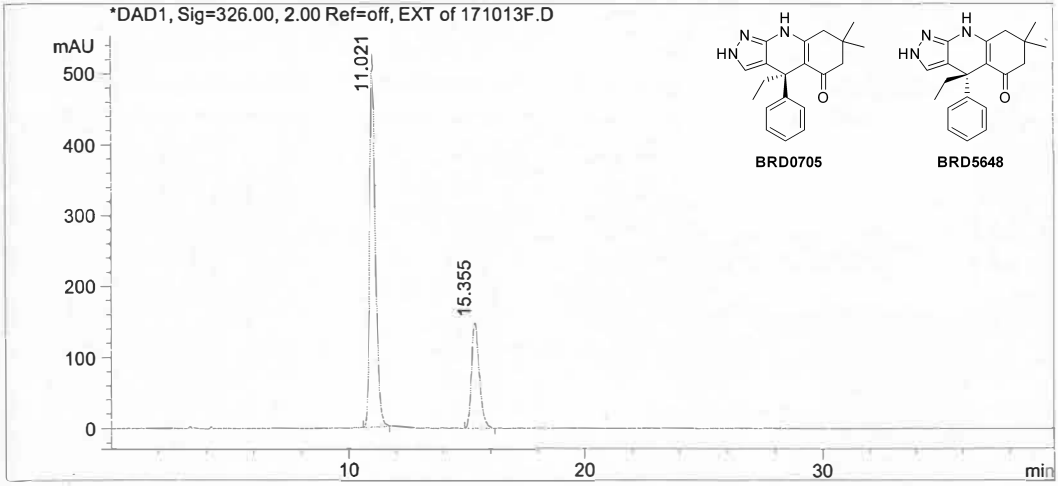


Signal 1: DAD1, Sig=326.00, 2.00 Ref=off, EXT

Peak #	RT [min]	Type	Width [min]	Area	Area %
1	11.152	MM	0.270	20390.010	100.000

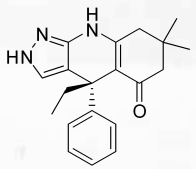
Data file : C:\CHEM32\1\DATA\OCT-2013\171013F.D
Sample Name: SBF-MA1307-090 Fr-I & Fr-II Co.inj
Column: Chiralpak IC (250x4.6mm,5µm),
Mobile Phase A :0.1%DEA n hexane
Mobile Phase B : DCM : MeOH(50:50)
A::B: 85 : 15
Flow : 1.0ml/min

Injection Date	: Thu, 17. Oct. 2013	Location	: Vial 67
Sample Name	: SBF-MA1307-090 Fr-I & Fr-->	Inj. No.	: 0
Acq Operator	: KSN	Inj. Vol.	: 25 µl
Acq. Method	: C:\Chem32\1\DATA\SEPT-2013\290813 2013-09-20 18-31-0->		
Analysis Method	: C:\Chem32\1\DATA\SEPT-2013\290813 2013-09-20 18-31-0->		
Last Changed	: Fri, 18. Oct. 2013, 08:46:57 am (modified after loading)		



Signal 1: DAD1, Sig=326.00, 2.00 Ref=off, EXT

Peak #	RT [min]	Type	Width [min]	Area	Area %
1	11.021	MM	0.275	8697.430	71.838
2	15.355	MM	0.381	3409.560	28.162

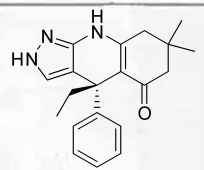


BRD5648

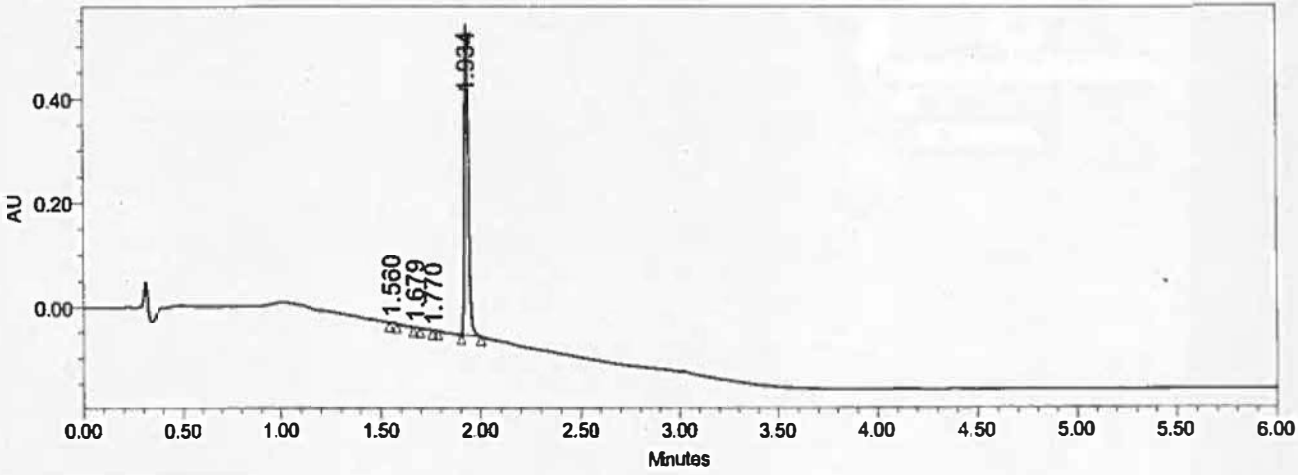
13
12
11
10
9
8
7
6
5
4
3
2
1
ppm
1.08
1.09
2.09
9.01
2.1212
1.19
2.04
3.22
6.13
3.00

Sample Name:	SBF-MA1307-090-Fr-II # IP13100452	Acquired By:	System
Vial:	1:C,6	Acq. Method Set:	PDA _METH_2A
Injection Volume:	1.00 ul	Proc. Chnl. Descr.:	PDA 210.0 nm
Run Time:	6.0 Minutes	Date Acquired:	10/17/2013 3:40:17 PM IST
Project Name:	SAPL_UNIT-2_AMCL_ALC-13_OCT-13		

Column : Acquity BEH C-18 (50 x2.1mm,1.7µ,)
Column Temp : 25℃
Mobile Phase A : Acetonitrile
Mobile Phase B : 0.025% TFA (Aq)
Flow Rate : 0.50 mL/Min
Time/% B : 0/90,0.5/90,3/10,6/10
Diluent : ACN:Water



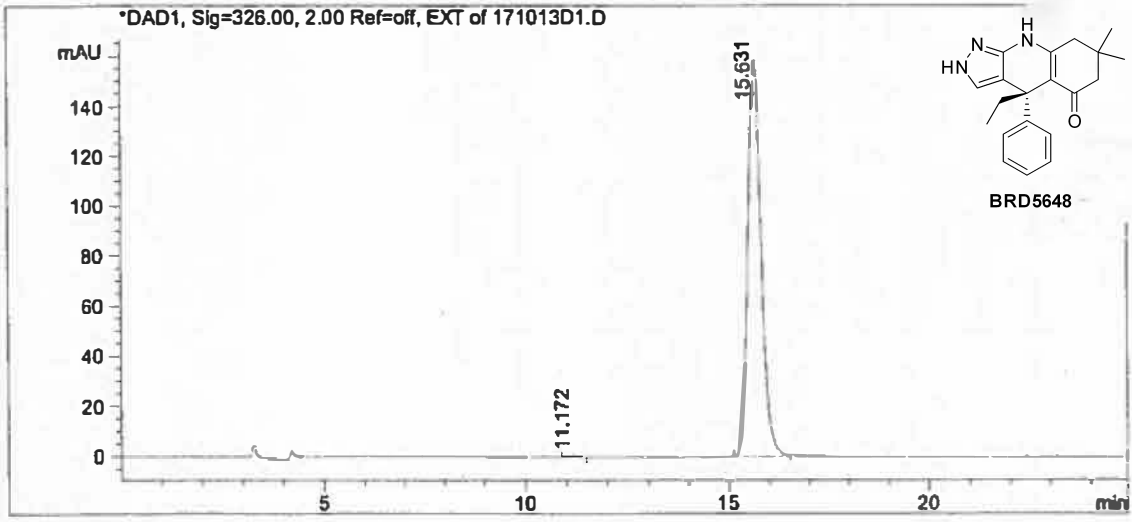
BRD5648



	RT	Area	% Area
1	1.56	2317	0.28
2	1.68	1876	0.23
3	1.77	842	0.10
4	1.93	824634	99.39

Data file : C:\CHEM32\1\DATA\OCT-2013\171013D1.D
Sample Name: SBF-MA1307-090Fr-II # IP13100451
Column:Chiralpak IC (250x4.6mm,5µm),
Mobile Phase A :0.1%DEA in n hexane
Mobile Phase B : DCM : MeOH(50:50)
A::B: 85 : 15
Flow : 1.0ml/min

Injection Date	: Thu, 17. Oct. 2013	Location	: Vial 66
Sample Name	: SBF-MA1307-090Fr-II # ->	Inj. No.	: 0
Acq Operator	: KSN	Inj. Vol.	: 20 µl
Acq. Method	: C:\Chem32\1\DATA\SEPT-2013\290813 2013-09-20 18-31-0->		
Analysis Method	: C:\Chem32\1\DATA\SEPT-2013\290813 2013-09-20 18-31-0->		
Last Changed	: Thu, 17. Oct. 2013, 05:51:18 pm (modified after loading)		

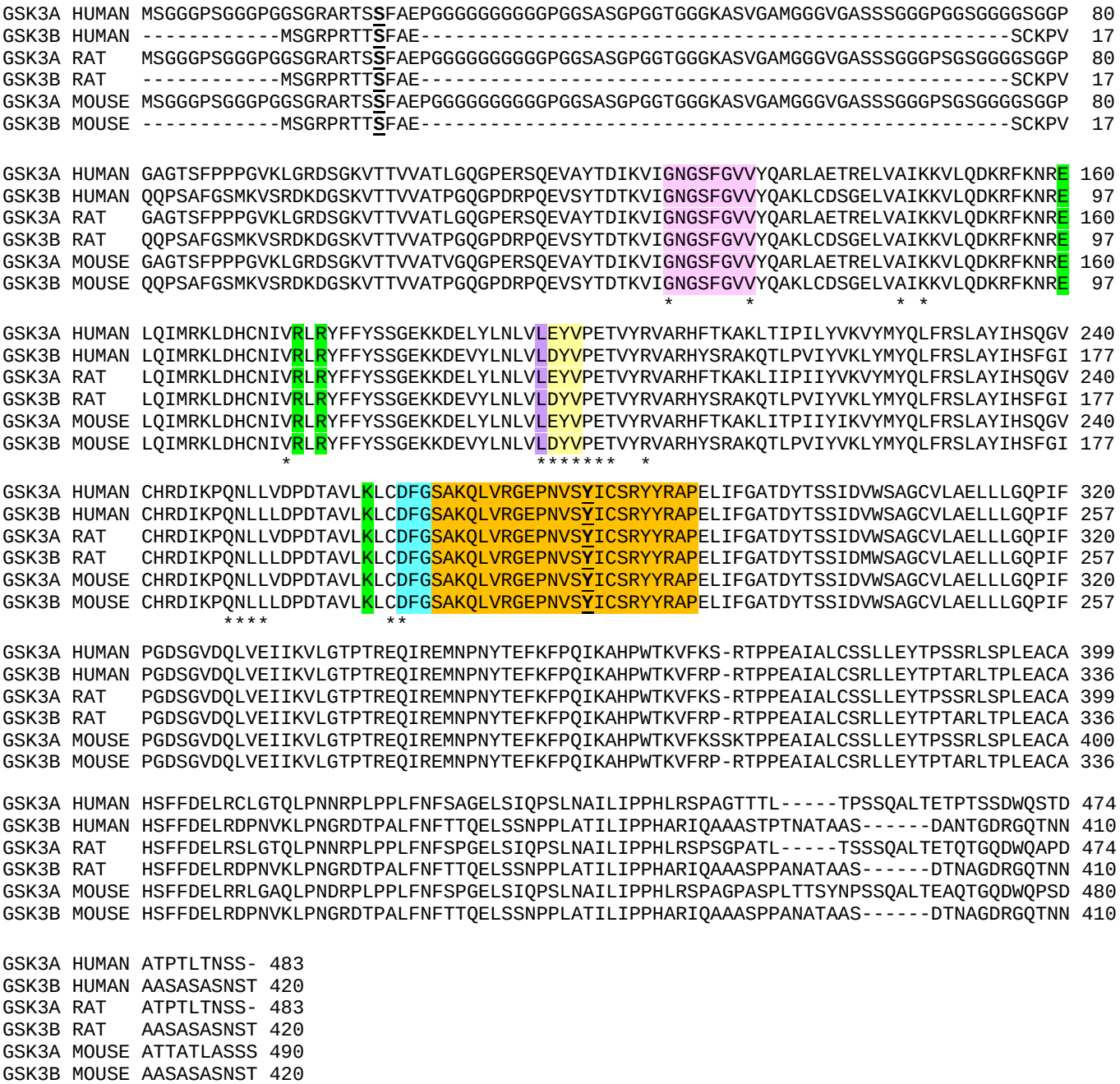


Signal 1: DAD1, Sig=326.00, 2.00 Ref=off, EXT

Peak #	RT [min]	Type	Width [min]	Area	Area %
1	11.172	MM	0.268	9.294	0.256
2	15.631	MM	0.380	3619.157	99.744

Supplementary Figures:

Figure S1. GSK3 conservation across species

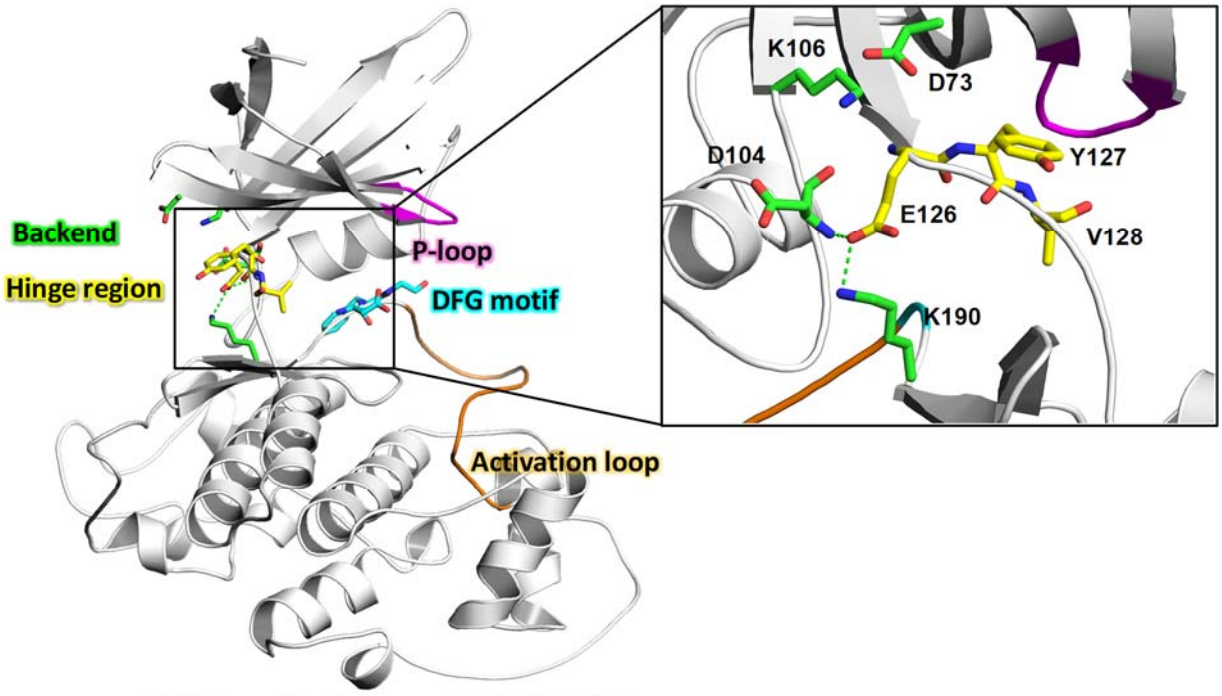


Legend

GSK3A HUMAN P49840
GSK3B HUMAN P49841
GSK3A RAT P18265
GSK3B RAT P18266
GSK3A MOUSE Q2NL51
GSK3B MOUSE Q9WV60

Figure S2. X-ray crystal structure of GSK3 from Ustailago Maydis.

Image generated from PDB 4E7W. Numbering is based on the Uniprot wild-type sequence ID Q4PH53. The hinge glutamic acid (Glu126) adopts in the fungal structure adopts a downward conformation also observed in our MD calculations.



GSK3 from Ustailago maydis (PDB 4E7W)

Reference:

Grutter, C., Simard, J. R., Mayer-Wrangowski, S. C., Schreier, P. H., Perez-Martin, J., Richters, A., Getlik, M., Gutbrod, O., Braun, C. A., Beck, M. E., and Rauh, D. (2012) Targeting GSK3 from Ustilago maydis: type-II kinase inhibitors as potential antifungals, *ACS Chem Biol* 7, 1257-1267.

Figure S3. Schematic of back end interactions depicting distance A between Glu196/Asp133 and Arg176/Arg113 and distance B between Arg176/Arg113 and Glu143/Glu80 for GSK3A and GSK3B respectively.

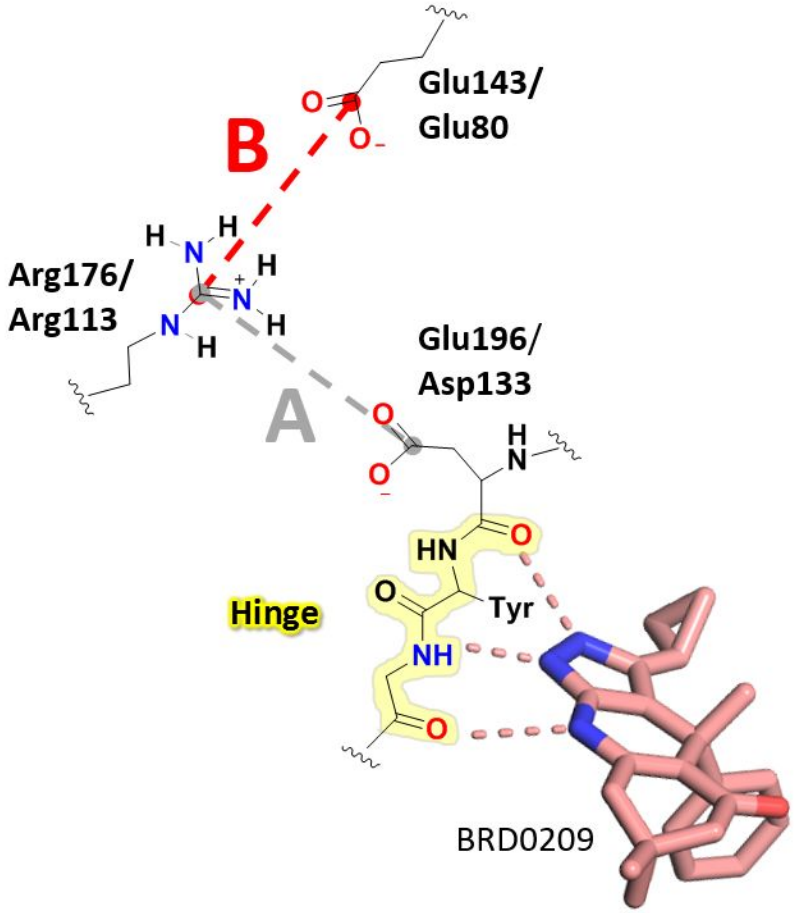


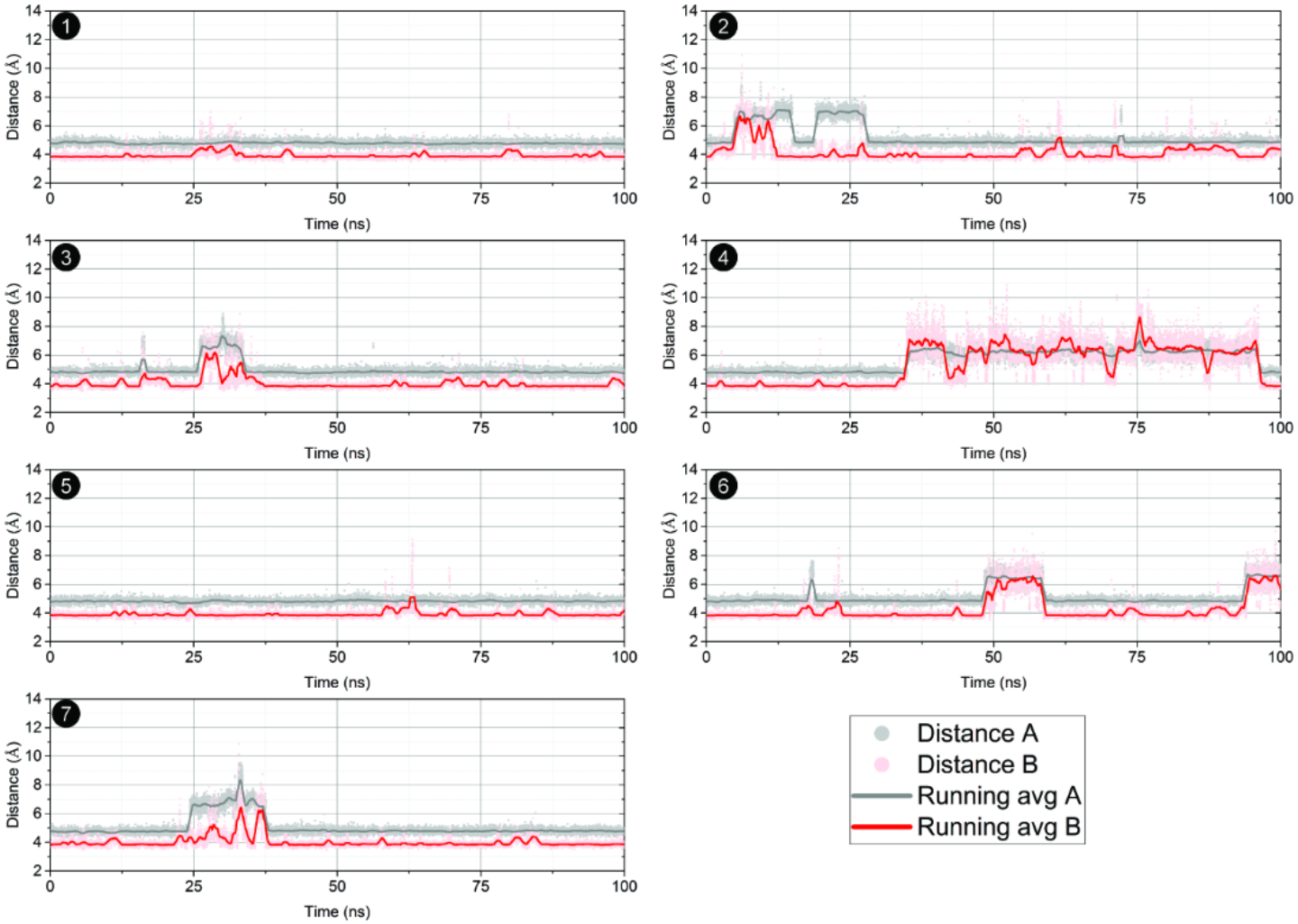
Figure S4. Hinge backend interaction measurements and energy plots

Distance vs Time plot: Supplemental figure S4 A and C.
Initial visual observations of the molecular dynamics simulations suggested that the backend hydrogen bond network behaves differently between the apo-GSK3α and apo-GSK3β simulations. To quantify this observation, two distances were measured using the Simulation Event Analysis program in Desmond version 4.7 (Desmond Molecular Dynamics System, version 4.7, D. E. Shaw Research, New York, NY, 2016. Maestro-Desmond Interoperability Tools, version 4.7, Schrödinger, New York, NY, 2016.) for GSK3α these two distances are distance A (Glu196 atom CD to Arg176 atom CZ, Figure S3) and distance B (Arg176 atom CZ to Glu143 atom CD) and for GSK3β these two distances are distance A (Asp133@ atom CG to Arg113 atom CZ) and distance B (Arg113 atom CZ to Glu80 atom CD. These measurements were plotted across time (nanoseconds), in addition, the running average was calculated in Origin 2015 (OriginLab, Northampton, MA) using 201 data points (100 data points before, 100 data points after and the data point selected).

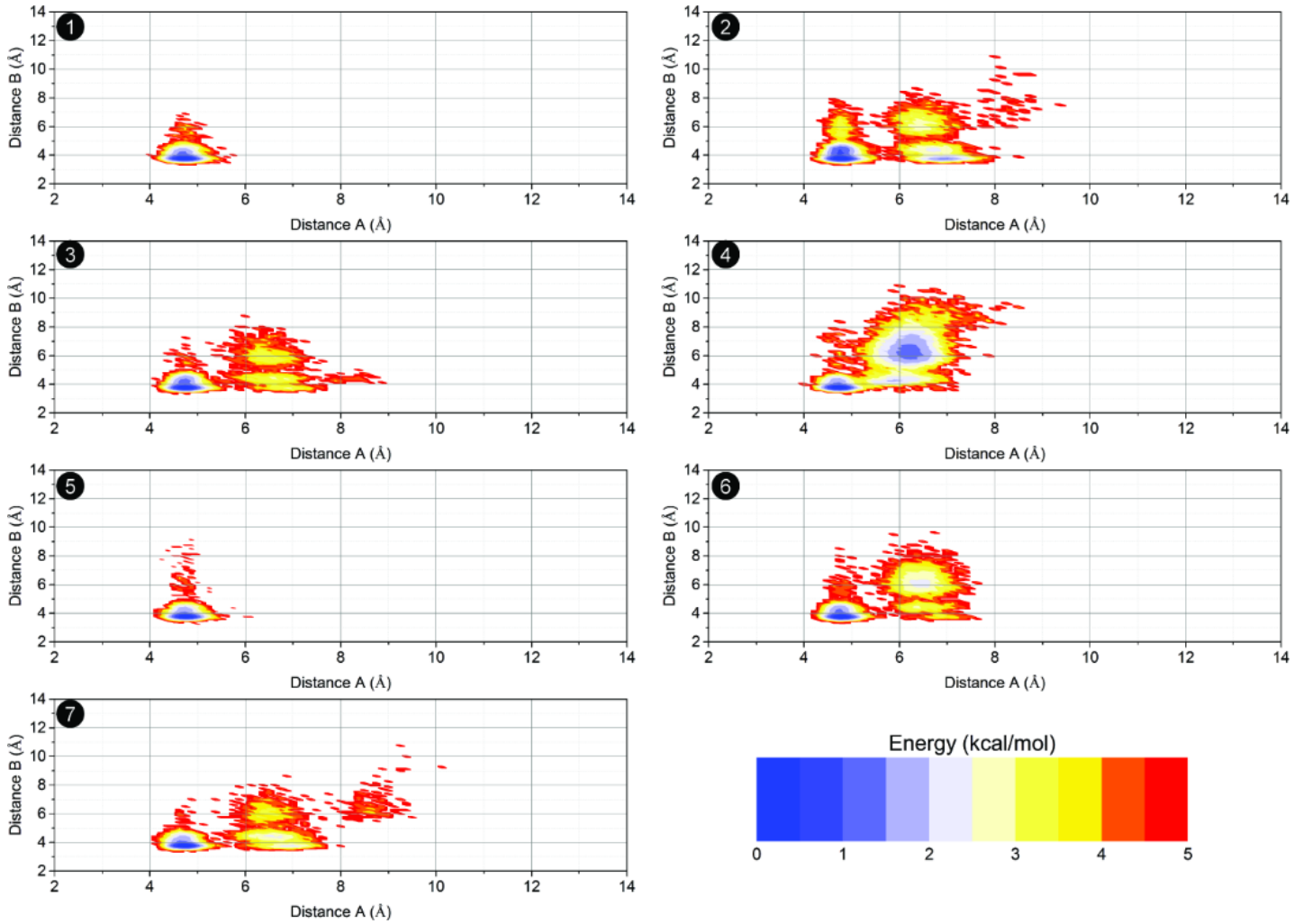
Free energy profiles: Supplemental figure S4 B and D.
The *hist* program in CPPTRAJ from AmberTools16 was employed to estimate the free energy profiles across the two sets of simulations with respect to the two distance measurements described in Figure S3 and Figure 1C panels 1-2 (Roe, 2013 and Case, 2016). The boundary conditions for the calculation were set with a minimum of 2 Å and a maximum of 14 Å. 96 bins were selected for the calculation. A temperature of 300K was defined as the simulation temperature.

References:
Daniel R. Roe and Thomas E. Cheatham, III, "PTRAJ and CPPTRAJ: Software for Processing and Analysis of Molecular Dynamics Trajectory Data". J. Chem. Theory Comput., 2013, 9 (7), pp 3084-3095.

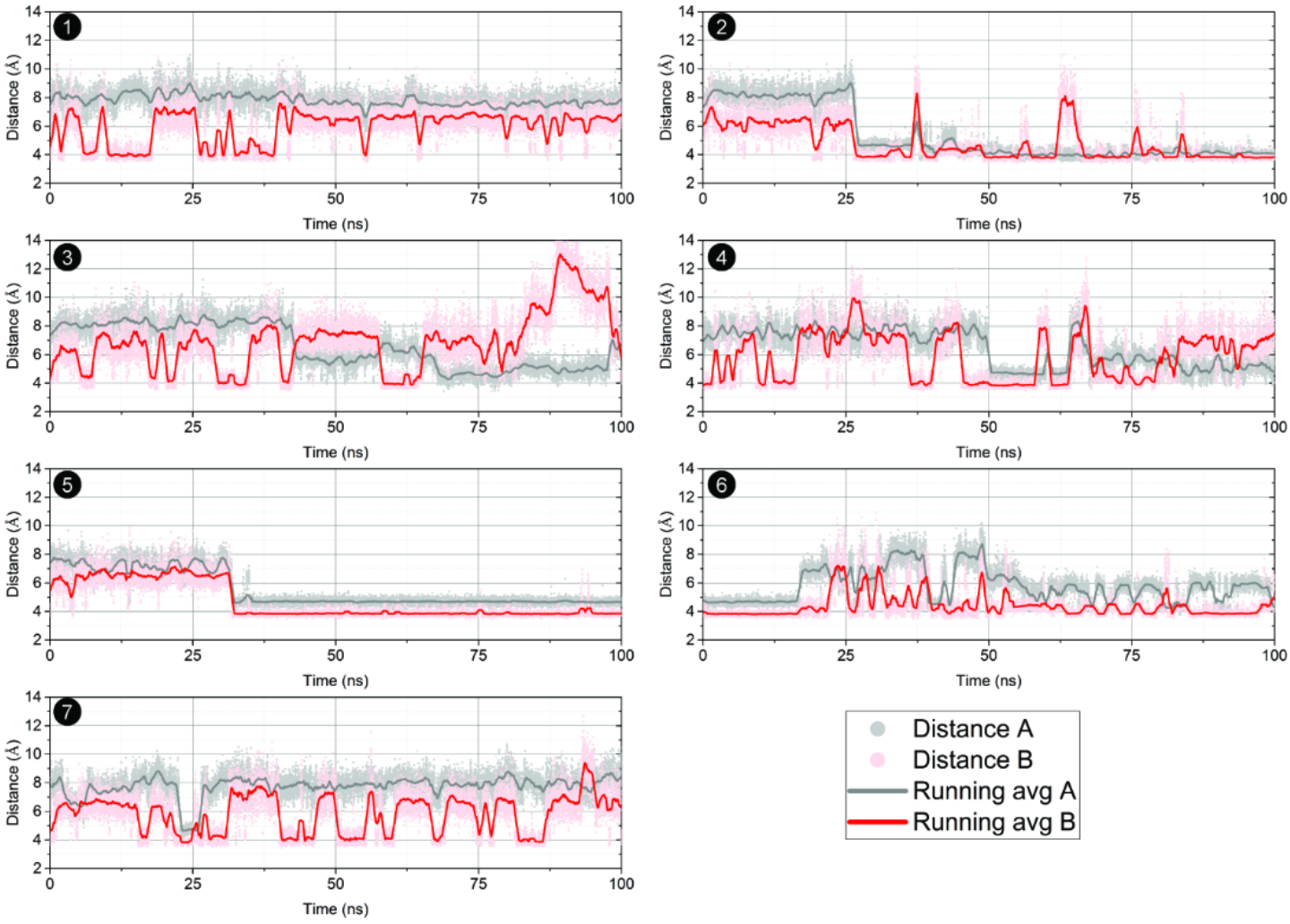
D.A. Case, R.M. Betz, D.S. Cerutti, T.E. Cheatham, III, T.A. Darden, R.E. Duke, T.J. Giese, H. Gohlke, A.W. Goetz, N. Homeyer, S. Izadi, P. Janowski, J. Kaus, A. Kovalenko, T.S. Lee, S. LeGrand, P. Li, C. Lin, T. Luchko, R. Luo, B. Madej, D. Mermelstein, K.M. Merz, G. Monard, H. Nguyen, H.T. Nguyen, I. Omelyan, A. Onufriev, D.R. Roe, A. Roitberg, C. Sagui, C.L. Simmerling, W.M. Botello-Smith, J. Swails, R.C. Walker, J. Wang, R.M. Wolf, X. Wu, L. Xiao and P.A. Kollman (2016), AMBER 2016, University of California, San Francisco.



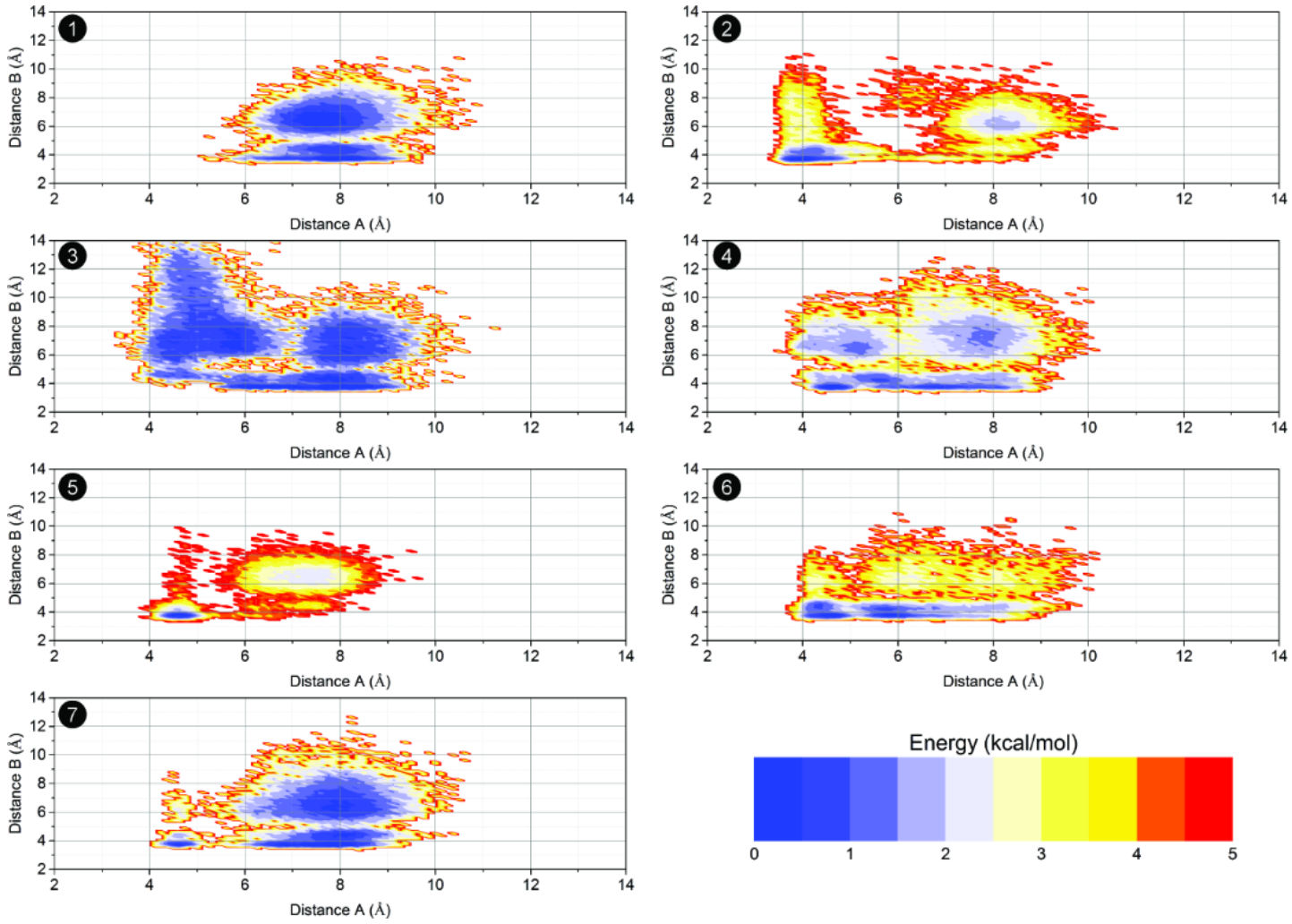
A. Apo GSK3B simulation: Back end distances measured across time. Solid lines represent running average.



B. Free energy plots in kcal/mol based on distances A and B of back end interactions for apo GSK3B. Blue represents low energy wells, red represents high energy regions.



C. Apo GSK3A simulation: Back end distances measured across time. Solid lines represent running average of 200 data points.



D. Free energy plots in kcal/mol based on distances A and B of back end interactions for apo GSK3A. Blue represents low energy wells, red represents high energy regions.

Figure S5. X-ray crystal structures of *h*GSK3B bound to BRD3731 (panels 1-3) and BRD0705 (panels 4-6) and *h*GSK3B(D133E) bound to BRD0705 (panels 7-9).

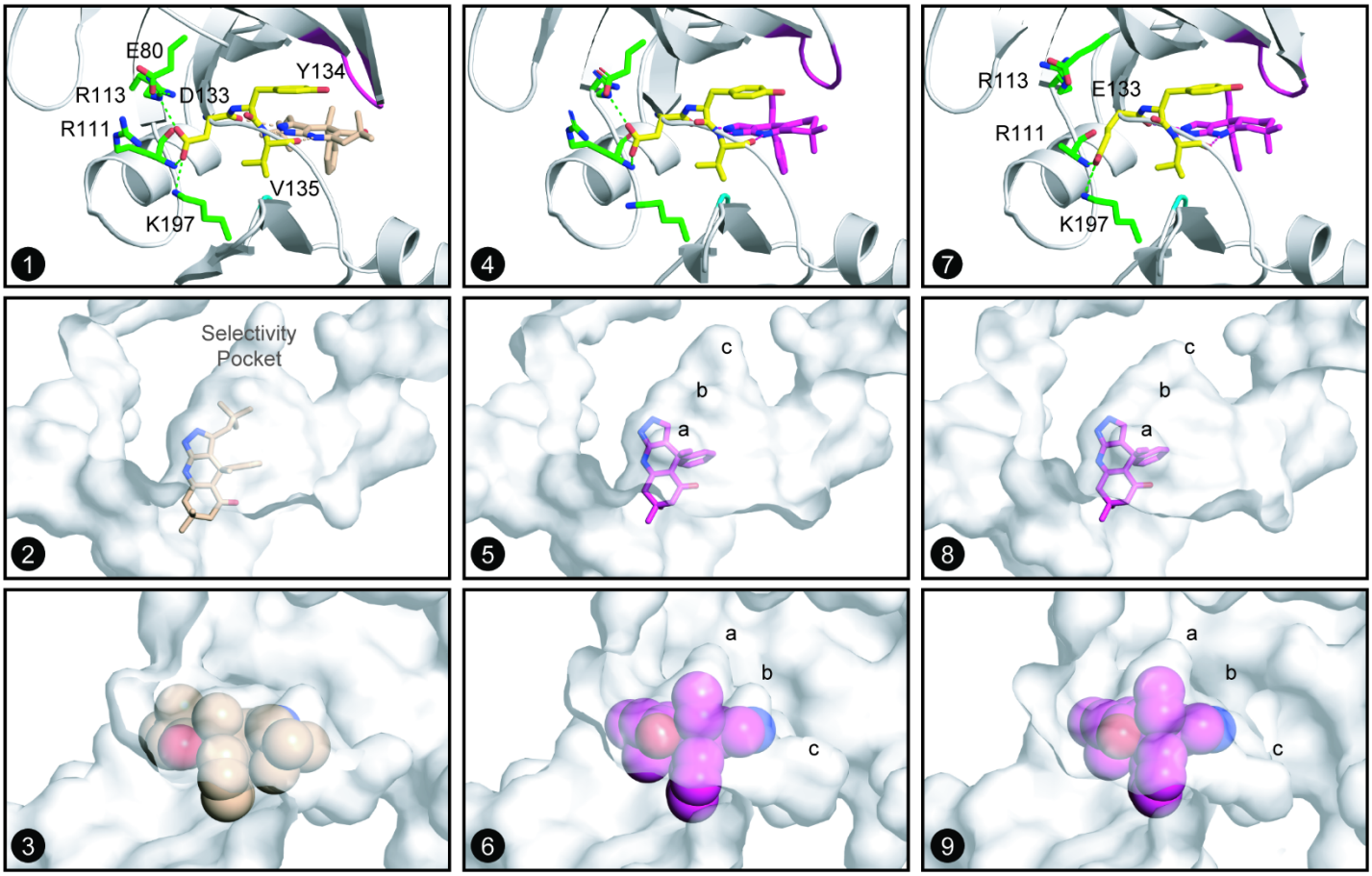


Figure S6. Live cell target engagement analysis for GSK3α and GSK3β using NanoBRET (Promega).

Engagement to NanoLuc-GSK3A and NanoLuc-GSK3B were analyzed in live HEK293 cells, following 2 h of equilibration with 100 nM NanoBRET Kinase Tracer 6. Graphs show representative data from an individual experiment (mean +/- S.D. of four data points).

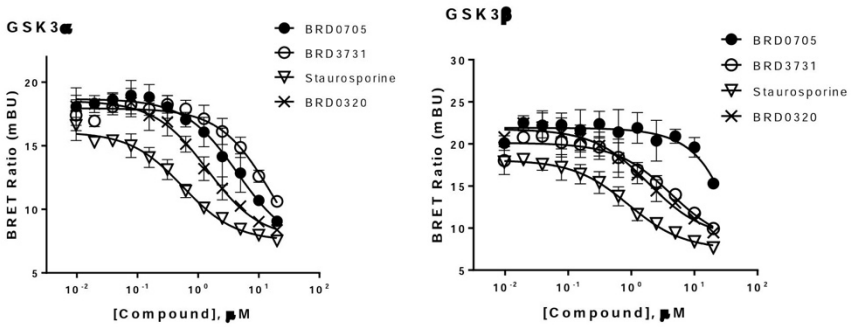
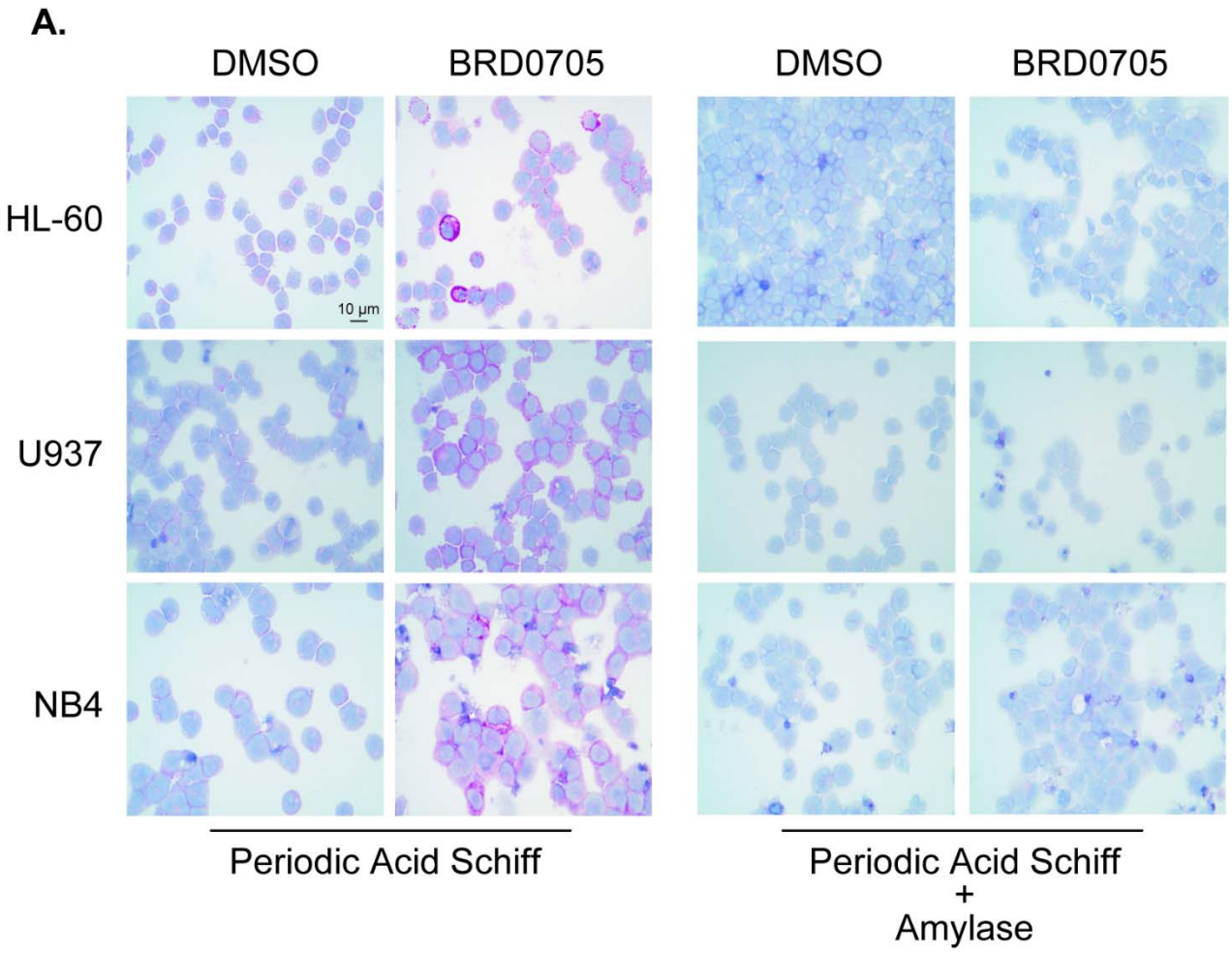


Figure S7. (A) PAS staining and (B) quantitative dosage of glycogen synthase after BRD0705 treatment.



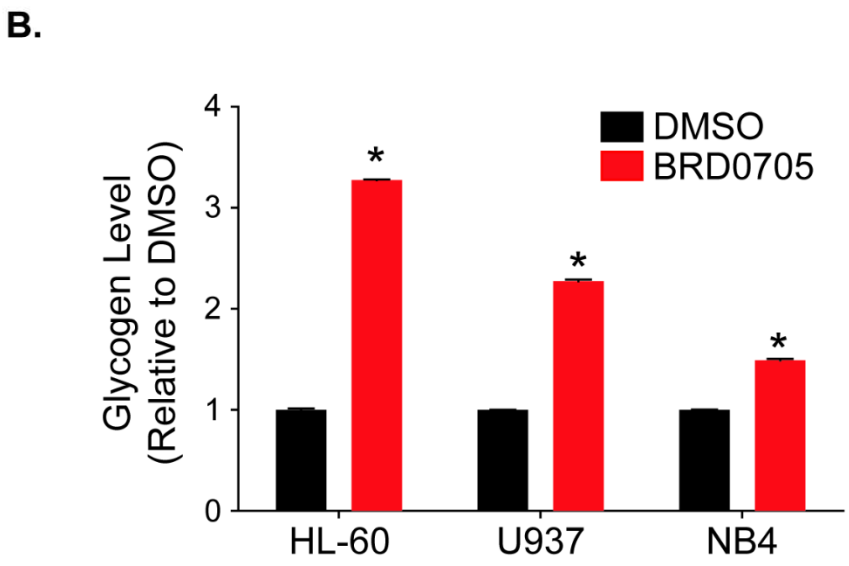


Figure S8. BRD3731 induces heterogeneous effects on differentiation and colony formation in AML cell lines.

(a-c) FACS analysis of the expression of CD11b, CD14, and CD11c cell surface markers in the indicated AML cell lines treated with BRD0705 for 6 days. * p value < 0.05 is calculated using a Welch's t test in comparison with the control condition. Error bars represent mean ± SEM of three biological replicates. (d) Colony formation assay of the indicated AML cell lines after BRD3731 pretreatment. Data are represented as mean ± SEM of 3 replicates.

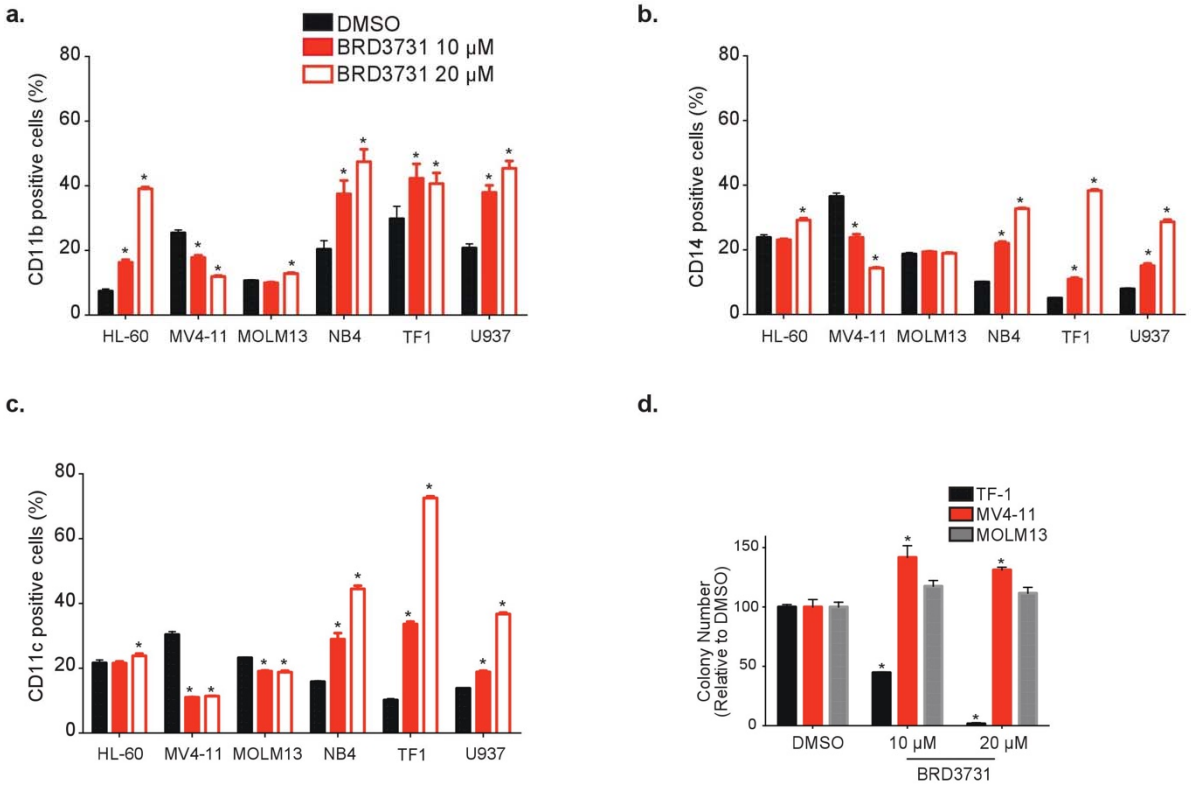


Figure S9. BRD0705 triggers differentiation, impairs stemness and mitochondria transcriptional programs.

BRD0705's signature identified by RNAseq was then interrogated in a functional enrichment analysis across the MsigDB database. (a) Functional transcriptional network upon BRD0705 treatment. Gene sets altered in the BRD0705 signature were obtained through quantitative comparison by GSEA of the c2 collection of gene sets. GSEA plots for the GSK3 inhibitor (CHIR99021) (b), targets of NUP98 HOXA9 fusion (c), HSC versus MONO (d) and MOOTHA_mitochondria signatures (e) are shown as significantly modulated representative gene sets of GSK3 inhibition, stemness inhibition, induced differentiation and mitochondria upregulation pathways respectively in response to BRD0705 treatment.

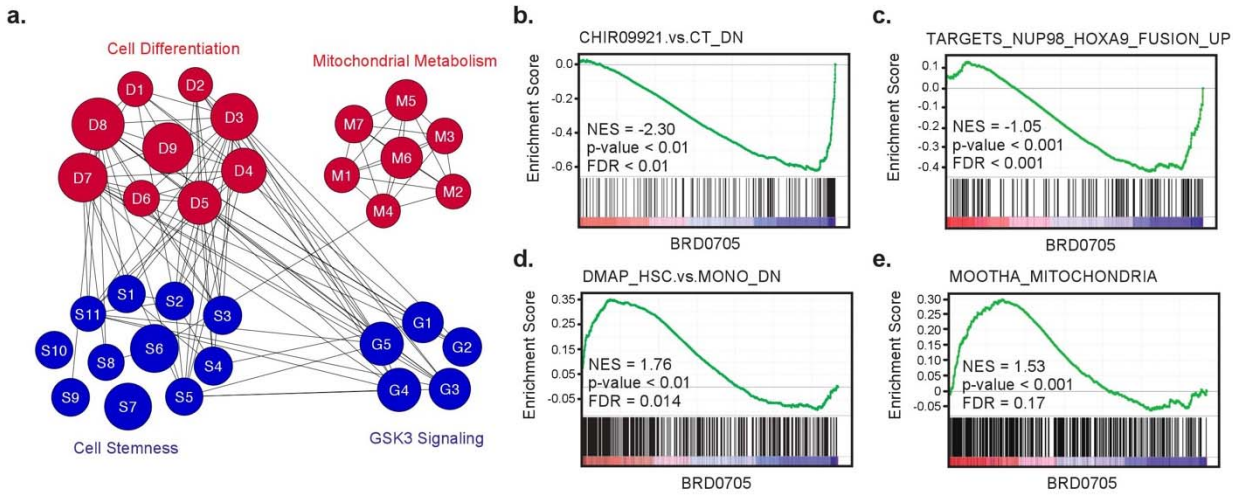
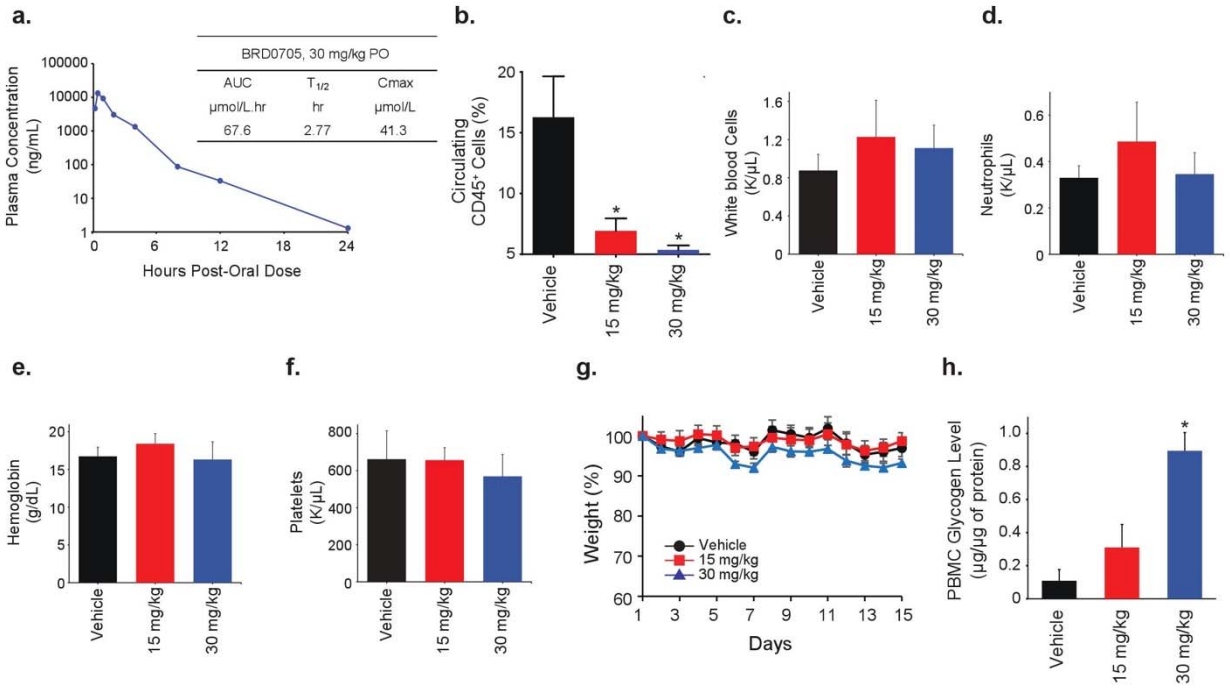


Figure S10. Pharmacokinetic, pharmacodynamic and tolerability properties of BRD0705.

(a) Pharmacokinetics time-concentration curve and corresponding pharmacokinetic parameters for BRD0705 (30 mg/kg) following a single oral dose in male C57BL/6 mice. (b) Circulating CD45+ cells measured by FACS at 2 weeks of treatment. (c-f) Complete blood counts were measured after 5 days of treatment with BRD0705 at 15 and 30 mg/kg. (g) Weight was measured daily. (h) Glycogen level was measured in peripheral blood mononuclear cells (PBMC) after 16 days of treatment with BRD0705 at 15 and 30 mg/kg as a biomarker of target engagement Data are represented as mean ± SEM. * p value < 0.05 is calculated using a Mann-Whitney test in comparison with control conditions.



Supplementary Tables:

Table S5. Kinome selectivity for BRD0320 and BRD5648 (Carna biosciences, JP)

Kinase	% Inhibition BRD0320 10μM	IC_{50}(μM)	Fold selectivity
GSK3β	102.9	0.024	
GSK3α	102.5	0.022	
CDK3/CycE1	87.2	1.11	46
CDK5/p25	86.6	1.81	75
CDK2/CycE1	85.6	1.43	60
CDK2/CycA2	85.5	2.56	107
CDK6/CycD3	51.9	5.16	215
CDC2/CycB1	49.4		
CDK4/CycD3	40.5		
CDK7/CycH/MAT1	37.4		
CDK9/CycT1	34.8		
PAK2	25.6		
AurB	18.9		
DYRK1B	12.2		
PLK2	9.0		
JNK2	8.3		
FLT3	8.2		
CK1α	7.8		
AMPKα1/β1/γ1	5.9		
Erk2	5.7		
PIM2	4.3		
PKACα	3.7		
AurA	3.7		
MST1	3.7		
BRSK2	3.5		
NEK1	3.5		
CLK1	3.1		
PIM1	3.1		
CK1ε	2.9		
NEK9	2.3		
LTK	2.2		
MARK3	2.1		
NEK2	1.5		
RSK1	1.3		
PBK	1.1		
p38α	0.8		
CK1γ3	0.8		
PKCα	-0.1		
TRKA	-0.5		
ROCK1	-1.1		
AurC	-1.5		
ROS	-1.5		
CK2α2/β	-1.8		
HGK	-2.0		
p70S6K	-2.1		
CaMK4	-2.4		
PDK1	-2.6		
NEK6	-3.0		
CHK1	-3.0		

Kinase	% Inhibition BRD5648 10μM	IC_{50}(μM)
CK1δ	94.7	0.638
GSK3α	86.2	1.35
PDHK4	85.8	2.08
CK1ε	82.3	2.23
CK1α	59.6	6.50
TSSK3	57.3	>50
p70S6Kβ	56.5	9.19
p70S6K	53.6	9.17
GSK3β	52.4	8.27
PDHK2	44.2	
IKKβ	40.7	
COT_Cascade	39.4	
CDK6/CycD3	37.8	
TNIK	37.3	
PAK2	37.2	
DDR1	35.8	
PIK3CA/PIK3R1	35.6	
MOS_Cascade	34.0	
MAP3K1_Cascade	32.3	
PKD3	28.9	
RAF1_Cascade	28.4	
MELK	28.0	
CHK2	27.4	
LCK	26.9	
HGK	26.9	
PIM3	26.4	
BRAF(V600E)_Cascad	24.4	
CK1γ2	23.1	
CaMK1δ	22.5	
CDK3/CycE1	22.0	
DLK_Cascade	21.7	
SPHK2	20.8	
DDR2	20.6	
FMS	20.6	
PKD1	19.7	
PIM1	19.7	
TYK2	19.4	
PLK2	19.2	
MAP2K1_Cascade	18.1	
HER2	17.7	
CaMK4	17.3	
CK1γ1	17.1	
MAP3K4_Cascade	16.7	
PHKG1	16.5	
KIT(V560G)	16.5	
BRAF_Cascade	16.2	
PLK3	15.8	
HIPK4	15.4	
AurB	15.1	

Kinase	% Inhibition BRD0320 10μM	IC_{50}(μM)	Fold selectivity
IRAK4	-3.1		
IKKβ	-3.2		
NEK7	-3.6		
AKT1	-4.4		
SGK	-4.5		
CHK2	-4.7		
TSSK1	-4.8		
CK2α1/β	-4.8		
PKD2	-6.0		
DAPK1	-6.3		
PLK1	-6.4		
CK1γ1	-7.0		
CK1δ	-8.7		
CDC7/ASK	-9.6		
MAPKAPK2	-14.4		

Kinase	% Inhibition BRD5648 10μM	IC_{50}(μM)
skMLCK	15.1	
EPHA6	15.0	
MSK2	14.8	
CLK2	14.5	
PASK	12.9	
CLK3	12.8	
PKN1	12.4	
AurA	12.3	
MAP4K2	12.1	
FGR	12.0	
EPHB3	12.0	
TRKB	11.9	
PKD2	11.8	
EPHB4	11.8	
SPHK1	11.6	
MLK3_Cascade	11.4	
FLT4	11.4	
Erk1	11.4	
CLK1	11.2	
DYRK1B	11.2	
MRCKα	11.1	
KIT	11.0	
CK1γ3	10.9	
MET	10.9	
YES	10.5	
PAK4	10.1	
CaMK2γ	10.1	
MAP2K4_Cascade	9.9	
TAOK2	9.9	
LYNb	9.8	
MAP3K5_Cascade	9.8	
KIT(D816E)	9.7	
RON	9.6	
Haspin	9.4	
MLK1_Cascade	9.3	
YES(T348I)	9.2	
TRKC	9.2	
HER4	9.2	
LATS2	9.1	
CDK2/CycA2	9.1	
TIE2	9.0	
JAK2	8.8	
CaMK2β	8.8	
SLK	8.8	
MST3	8.7	
FLT3	8.7	
DYRK1A	8.7	
PAK1	8.7	
PKACγ	8.6	

Kinase	% Inhibition BRD5648 10μM	IC_{50}(μM)
MET(D1228H)	8.5	
AMPKα1/β1/γ1	8.4	
PIM2	8.4	
RSK2	8.4	
EPHA7	8.4	
KIT(V654A)	8.2	
MNK2	8.1	
EGFR(d746-750)	8.0	
BLK	8.0	
CDK5/p25	7.9	
SIK	7.8	
CHK1	7.7	
PEK	7.7	
CDC2/CycB1	7.6	
AMPKα2/β1/γ1	7.6	
DYRK3	7.6	
TRKA	7.5	
DCAMKL2	7.4	
MAP3K2_Cascade	7.3	
PDGFRα(T674I)	7.2	
TAK1-TAB1_Cascade	7.2	
FRK	7.2	
CaMK2δ	7.2	
TNK1	6.9	
PKCι	6.9	
MINK	6.6	
PAK5	6.5	
FLT1	6.4	
EGFR(L858R)	6.3	
MET(M1250T)	6.3	
IKKα	6.3	
EGFR(L861Q)	6.1	
ROS	6.1	
Erk2	6.0	
MST1	5.9	
IRAK1	5.9	
ITK	5.7	
CDK9/CycT1	5.7	
MNK1	5.7	
EGFR(T790M/L858R)	5.7	
INSR	5.6	
PRKX	5.3	
PKCδ	5.2	
PLK1	5.2	
CaMK2α	5.1	
TSSK2	5.1	
CDC7/ASK	5.0	
PHKG2	4.9	
PBK	4.8	

Kinase	% Inhibition BRD5648 10μM	IC_{50}(μM)
KIT(D816V)	4.8	
CaMK1α	4.8	
EPHA4	4.7	
FGFR4	4.7	
BRSK1	4.7	
FGFR3	4.5	
PDGFRα(V561D)	4.5	
MAPKAPK5	4.4	
KIT(T670I)	4.4	
JNK2	4.3	
RSK1	4.2	
SRPK1	4.1	
PKCγ	4.1	
JNK1	4.0	
EGFR	4.0	
MET(Y1235D)	4.0	
BRSK2	3.9	
FES	3.9	
RSK3	3.8	
WNK2	3.7	
NEK1	3.7	
SRM	3.4	
FGFR3(K650M)	3.4	
ALK(F1174L)	3.4	
KDR	3.3	
p38α	3.0	
MST2	3.0	
SGK2	3.0	
MARK1	2.9	
EPHA3	2.9	
PKCε	2.8	
TXK	2.8	
PDGFRα	2.6	
SGK	2.5	
FGFR3(K650E)	2.5	
EGFR(d746-750/T790M	2.5	
NPM1-ALK	2.4	
MST4	2.4	
LYNa	2.3	
EML4-ALK	2.3	
DAPK1	2.2	
MSK1	2.1	
CDK2/CycE1	2.1	
RSK4	2.1	
EPHA1	2.0	
TEC	2.0	
CRIK	2.0	
JAK1	2.0	
FGFR2	2.0	

Kinase	% Inhibition BRD5648 10μM	IC_{50}(μM)
MAPKAPK3	1.9	
MAP2K7_Cascade	1.8	
ROCK1	1.8	
JAK3	1.7	
MAP2K5_Cascade	1.5	
QIK	1.5	
NEK6	1.4	
PAK6	1.3	
ACK	1.3	
EPHA8	1.2	
EPHA2	1.1	
ROCK2	1.1	
FGFR4(V550E)	0.9	
AurC	0.9	
FYN(isoform b)	0.8	
RET(Y791F)	0.7	
EGFR(T790M)	0.7	
FGFR1	0.6	
FGFR4(V550L)	0.6	
MARK3	0.6	
MGC42105	0.5	
FER	0.4	
SRC	0.4	
DYRK2	0.3	
AXL	0.2	
NuaK1	0.0	
ABL	0.0	
PDGFRα(D842V)	-0.4	
HIPK1	-0.4	
EEF2K	-0.5	
IGF1R	-0.5	
PKACα	-0.6	
AurA/TPX2	-0.6	
TYRO3	-0.6	
CDK7/CycH/MAT1	-0.7	
PGK	-0.8	
MER	-0.9	
ABL(T315I)	-1.0	
MSSK1	-1.0	
MRCKβ	-1.0	
NEK9	-1.1	
ABL(E255K)	-1.1	
HCK	-1.1	
PDGFRβ	-1.4	
MARK2	-1.5	
ALK	-1.6	
EPHA5	-1.7	
EPHB1	-1.8	
IRR	-1.8	

Kinase	% Inhibition BRD5648 10μM	IC_{50}(μM)
ALK(R1275Q)	-1.9	
IKKε	-2.0	
MUSK	-2.1	
PKCβ2	-2.1	
SGK3	-2.3	
RET	-2.3	
MLK2_Cascade	-2.4	
CDK4/CycD3	-2.5	
NEK2	-2.7	
TSSK1	-2.7	
PKACβ	-2.8	
Erk5	-2.8	
IRAK4	-2.8	
TBK1	-2.9	
PKCα	-2.9	
PDK1	-2.9	
ARG	-3.0	
FAK	-3.1	
WNK3	-3.3	
EPHB2	-3.4	
CSK	-3.4	
BRK	-3.5	
NuaK2	-3.5	
LTK	-3.6	
MAPKAPK2	-3.9	
NEK4	-3.9	
PKR	-4.0	
MAP3K3_Cascade	-4.2	
CK2α2/β	-4.4	
MAP2K6_Cascade	-4.5	
RET(S891A)	-4.9	
PKCθ	-4.9	
RET(M918T)	-5.7	
WNK1	-5.8	
PYK2	-5.9	
NDR1	-6.1	
CK2α1/β	-6.2	
SYK	-6.6	
NEK7	-6.8	
SRPK2	-6.9	
PKCβ1	-7.3	
LOK	-7.7	
FGFR1(V561M)	-8.0	
HIPK3	-9.6	
HIPK2	-9.6	
ALK(L1196M)	-9.7	
NDR2	-9.8	
FYN(isoform a)	-10.3	
p38β	-11.2	

Kinase	% Inhibition BRD5648 10μM	IC_{50}(μM)
MAP2K2_Cascade	-11.3	
RET(G691S)	-11.6	
MARK4	-11.8	
CGK2	-11.8	
p38δ	-12.2	
BTK	-12.5	
JNK3	-13.2	
BMX	-13.7	
PKCη	-14.6	
MAP2K3_Cascade	-20.4	
AKT2	-24.7	
p38γ	-26.3	
PKCζ	-28.1	
AKT3	-30.6	
AKT1	-37.8	

Table S6. Kinome selectivity for BRD0705 and BRD3731 (Carna biosciences, JP)

Kinase	% Inhibition BRD0705 10μM	IC_{50}(μM)	Fold selectivity
GSK3α	100.8	0.079	
GSK3β	96.5	0.488	6.2
CDK2/CycA2	65.3	6.87	86.9
CDK2/CycE1	53.4	9.43	119.3
CDK3/CycE1	52.8	9.74	123.3
CDK5/p25	52.0	9.20	116.4
PAK4	33.8		
ROS	31.3		
EPHA3	25.2		
FLT3	25.0		
FGFR4(N535K)	22.1		
CDC2/CycB1	17.2		
HGK	14.9		
EPHB4	14.7		
EPHA5	12.7		
MST3	11.7		
MAP3K4_Cascade	11.6		
COT_Cascade	11.2		
PDHK4	11.0		
LOK	9.6		
PAK5	9.3		
CDK9/CycT1	8.4		
CDK7/CycH/MAT1	8.3		
YES	7.9		
BRAF_Cascade	7.8		
DYRK3	7.7		
RAF1_Cascade	7.5		
EPHA6	7.4		
AurC	7.3		
BRAF(V600E)_Cascad	7.0		
TNIK	6.8		
MAP2K3_Cascade	6.7		
EPHB2	6.5		
PAK2	6.4		
TRKC	6.4		
MLK1_Cascade	6.3		
AurA	6.1		
CK1α	6.0		
MAP3K3_Cascade	5.6		
AMPKα2/β1/γ1	5.1		
TAK1-TAB1_Cascade	5.0		
LCK	5.0		
MLK3_Cascade	4.6		
TRKB	4.5		
ABL	4.2		
MAP2K6_Cascade	4.2		
JAK3	4.1		
PLK2	4.0		
IRR	4.0		

Kinase	% Inhibition BRD3731 10μM	IC_{50}(μM)	Fold selectivity
GSK3β	100.7	0.027	
GSK3α	96.8	0.211	7.8
CDK5/p25	48.3	8.9	331.0
RSK2	42.8		
CDK2/CycE1	42.6	8.8	326.9
PIK3CA/PIK3R1	42.5		
MELK	39.2		
CDK2/CycA2	36.3	>10	>370
RSK3	35.5		
RSK4	33.9		
MER	33.7		
TSSK3	33.6		
CDK3/CycE1	29.2	>10	>370
CDK6/CycD3	28.3	>10	>370
CK1ε	28.0		
CDC2/CycB1	27.8		
PDHK4	24.2		
RSK1	23.4		
MARK4	22.7		
MAPKAPK2	22.4		
CDK7/CycH/MAT1	21.3		
CDK4/CycD3	18.1		
PKD2	17.2		
PKACα	17.1		
FLT4	16.8		
CaMK1δ	16.7		
AMPKα2/β1/γ1	16.7		
MARK2	16.5		
PKN1	16.2		
DYRK3	16.0		
HIPK4	15.9		
AurA	15.4		
SPHK2	15.2		
PLK4	14.3		
PHKG1	13.9		
FLT3	13.8		
PIM3	13.1		
PDHK2	12.7		
p70S6Kβ	12.6		
MSK2	12.6		
p70S6K	12.5		
MAP3K4_Cascade	12.4		
CaMK4	12.4		
TRKC	12.1		
PKCθ	12.1		
FGR	12.0		
TRKA	12.0		
ABL	11.4		
CDK9/CycT1	11.3		

Kinase	% Inhibition BRD0705 10μM	IC_{50}(μM)	Fold selectivity
EPHA4	4.0		
PKD3	3.9		
TYRO3	3.8		
AXL	3.7		
NPM1-ALK	3.7		
PYK2	3.5		
KIT(D816V)	3.5		
NEK9	3.5		
TSSK3	3.5		
PKACα	3.4		
EML4-ALK	3.4		
YES(T348I)	3.3		
SRC	3.2		
IRAK1	3.1		
MARK1	3.1		
FYN	3.1		
MAP2K1_Cascade	3.0		
EPHA8	2.9		
TRKA	2.9		
CHK1	2.9		
BMX	2.7		
p38δ	2.4		
MINK	2.4		
LYNb	2.2		
MLK2_Cascade	2.1		
HIPK4	2.1		
BTK	2.1		
MARK4	2.0		
PKR	2.0		
MAP3K5_Cascade	1.9		
MAP3K1_Cascade	1.8		
BRSK2	1.8		
PKN1	1.8		
FER	1.7		
ALK(F1174L)	1.7		
PEK	1.7		
TBK1	1.7		
Erk2	1.6		
HER4	1.3		
MAP2K2_Cascade	1.3		
PIM3	1.2		
ALK	1.1		
HCK	1.1		
RSK4	1.1		
ARG	1.1		
MAP3K2_Cascade	1.0		
CSK	0.9		
FRK	0.9		
SGK2	0.8		

Kinase	% Inhibition BRD3731 10μM	IC_{50}(μM)	Fold selectivity
AMPKα1/β1/γ1	11.2		
PIM1	11.0		
TRKB	11.0		
PKCδ	10.7		
PASK	10.7		
CK1δ	10.7		
COT_Cascade	10.5		
SGK2	10.4		
EGFR	10.0		
EPHA6	9.6		
RET(Y791F)	9.5		
skMLCK	9.4		
MARK1	9.3		
PKACβ	9.3		
LCK	9.2		
BRAF_Cascade	8.9		
PKD1	8.9		
PLK2	8.5		
ABL(E255K)	8.3		
SIK	8.2		
PKCα	8.1		
BRSK1	7.9		
DDR2	7.9		
JAK3	7.8		
DDR1	7.6		
MAP2K4_Cascade	7.6		
LIMK1	7.5		
MST3	7.4		
MSK1	7.4		
KDR	7.1		
TIE2	6.7		
PDGFRα	6.7		
HCK	6.6		
PDGFRα(V561D)	6.6		
PAK5	6.5		
PKACγ	6.5		
HER4	6.5		
SRPK2	6.4		
MST4	6.4		
FER	6.4		
EPHB2	6.4		
ARG	6.4		
IRR	6.2		
MAPKAPK5	6.1		
MAP2K5_Cascade	6.1		
CLK2	6.1		
PHKG2	6.0		
MAPKAPK3	6.0		
HIPK1	5.8		

Kinase	% Inhibition BRD0705 10μM	IC_{50}(μM)	Fold selectivity
ALK(R1275Q)	0.7		
ABL(T315I)	0.7		
FES	0.6		
SYK	0.6		
PIM2	0.5		
PDGFRα(T674I)	0.5		
RSK2	0.4		
ALK(L1196M)	0.4		
ITK	0.3		
PDGFRβ	0.3		
EGFR	0.3		
TIE2	0.3		
PASK	0.2		
IKKα	-0.2		
KIT	-0.3		
ABL(E255K)	-0.3		
CK1ε	-0.4		
LYNa	-0.4		
FGFR4(V550L)	-0.4		
MST4	-0.4		
TEC	-0.4		
JAK2	-0.5		
HIPK2	-0.5		
PKCα	-0.5		
FGFR4(V550E)	-0.5		
DCAMKL2	-0.5		
PDHK2	-0.5		
CDK6/CycD3	-0.5		
MUSK	-0.6		
MAP2K7_Cascade	-0.6		
MAP4K2	-0.7		
KIT(T670I)	-0.8		
PDGFRα	-0.8		
MET(Y1235D)	-1.0		
PKCζ	-1.0		
NEK7	-1.0		
MAPKAPK5	-1.0		
MOS_Cascade	-1.0		
KIT(V654A)	-1.0		
DLK_Cascade	-1.1		
JAK1	-1.3		
EPHB3	-1.3		
DDR2	-1.4		
INSR	-1.4		
BRK	-1.4		
CLK3	-1.5		
MSSK1	-1.6		
BRSK1	-1.6		
KIT(V560G)	-1.7		

Kinase	% Inhibition BRD3731 10μM	IC_{50}(μM)	Fold selectivity
TTK	5.4		
PYK2	5.3		
Haspin	5.3		
FMS	5.2		
PKCζ	5.0		
PKCγ	5.0		
SRPK1	5.0		
BLK	4.9		
AurC	4.9		
CaMK1α	4.7		
TYK2	4.6		
Erk5	4.5		
CGK2	4.4		
MRCKα	4.3		
DYRK2	4.1		
PKCβ1	4.1		
CLK3	4.0		
MAP3K1_Cascade	4.0		
PLK3	4.0		
EEF2K	3.9		
KIT(D816E)	3.9		
MST1	3.9		
HER2	3.8		
PKCβ2	3.8		
TSSK2	3.8		
AXL	3.8		
AurA/TPX2	3.8		
JAK1	3.7		
EGFR(d746-750/T790M	3.7		
CK1γ2	3.6		
ALK(L1196M)	3.6		
LKB1	3.4		
Erk1	3.4		
SPHK1	3.4		
MAP2K6_Cascade	3.3		
DYRK1A	3.3		
HIPK3	3.2		
FLT1	3.2		
FRK	3.2		
HIPK2	3.2		
EPHA2	3.2		
MAP2K1_Cascade	3.1		
PDGFRβ	3.1		
CLK1	3.1		
PKR	3.1		
PDGFRα(T674I)	3.1		
EPHA3	3.0		
JAK2	3.0		
MAP2K7_Cascade	3.0		

Kinase	% Inhibition BRD0705 10μM	IC_{50}(μM)	Fold selectivity
NuaK2	-1.7		
TXK	-1.7		
EGFR(L861Q)	-1.8		
SGK3	-1.8		
DDR1	-2.0		
ROCK1	-2.0		
SRPK1	-2.0		
NuaK1	-2.0		
p70S6Kβ	-2.1		
CK1γ3	-2.1		
PGK	-2.1		
RET(Y791F)	-2.2		
TYK2	-2.2		
MAP2K5_Cascade	-2.3		
EPHA1	-2.3		
MET	-2.4		
SRPK2	-2.5		
JNK2	-2.5		
skMLCK	-2.5		
PHKG1	-2.5		
MSK2	-2.5		
IGF1R	-2.5		
EPHA2	-2.6		
FLT1	-2.6		
FGFR1	-2.7		
p38β	-2.7		
FGFR3(K650M)	-2.7		
AurB	-2.8		
FGFR3	-2.8		
PAK1	-2.9		
RET(M918T)	-2.9		
MAP2K4_Cascade	-3.0		
CaMK1δ	-3.0		
DYRK2	-3.0		
CLK2	-3.0		
RET(S891A)	-3.1		
DYRK1A	-3.1		
FGFR1(V561M)	-3.2		
MER	-3.3		
MST2	-3.4		
TSSK2	-3.4		
JNK3	-3.4		
PIM1	-3.4		
p38γ	-3.4		
FGR	-3.4		
CK1γ1	-3.4		
BLK	-3.4		
EGFR(d746-750/T790M	-3.5		
PKACγ	-3.6		

Kinase	% Inhibition BRD3731 10μM	IC_{50}(μM)	Fold selectivity
ALK	3.0		
RET	3.0		
NEK9	2.9		
LYNb	2.9		
FGFR4(V550L)	2.9		
ITK	2.8		
MSSK1	2.8		
EGFR(L861Q)	2.7		
EPHB1	2.7		
PKD3	2.6		
EGFR(d746-750)	2.5		
PKCι	2.5		
FGFR1	2.3		
RON	2.3		
FAK	2.3		
TEC	2.3		
TAOK2	2.2		
MINK	2.2		
EPHA1	2.1		
WNK3	2.1		
PDK1	2.0		
DYRK1B	2.0		
CSK	1.9		
ALK(R1275Q)	1.9		
EPHB4	1.9		
PGK	1.9		
FGFR2	1.9		
IKKα	1.8		
PKCε	1.8		
MAP3K3_Cascade	1.8		
TAK1-TAB1_Cascade	1.7		
YES	1.6		
WNK2	1.6		
CHK2	1.5		
MST2	1.5		
PEK	1.4		
KIT(V560G)	1.4		
TXK	1.3		
CK1γ1	1.2		
MET(Y1235D)	1.2		
IRAK1	1.2		
SRC	1.0		
DLK_Cascade	0.9		
Erk2	0.9		
SRM	0.9		
p38α	0.9		
ROS	0.9		
MET(M1250T)	0.8		
ROCK1	0.8		

Kinase	% Inhibition BRD0705 10μM	IC_{50}(μM)	Fold selectivity
CHK2	-3.6		
LTK	-3.6		
PDGFRα(V561D)	-3.7		
WNK3	-3.7		
RON	-3.8		
SPHK2	-3.8		
MRCKα	-3.8		
JNK1	-3.9		
CK1δ	-3.9		
FAK	-3.9		
PKCη	-4.0		
EGFR(T790M/L858R)	-4.0		
IKKβ	-4.0		
EGFR(L858R)	-4.0		
TNK1	-4.0		
AMPKα1/β1/γ1	-4.1		
WNK1	-4.2		
PKCι	-4.3		
SGK	-4.4		
CaMK2δ	-4.4		
IKKε	-4.5		
ACK	-4.5		
PKCε	-4.5		
NEK2	-4.5		
CaMK1α	-4.7		
CaMK2γ	-4.7		
AKT2	-4.7		
PRKX	-4.7		
SIK	-4.8		
NDR1	-4.8		
KDR	-4.8		
EGFR(T790M)	-4.9		
WNK2	-5.0		
Haspin	-5.1		
NEK4	-5.1		
MNK1	-5.2		
MARK3	-5.3		
AurA/TPX2	-5.3		
EPHA7	-5.3		
SRM	-5.5		
PKCδ	-5.5		
RET	-5.6		
MELK	-5.6		
RET(G691S)	-5.6		
NEK6	-5.7		
PKCβ2	-5.7		
ROCK2	-5.8		
PHKG2	-5.8		
TAOK2	-5.8		

Kinase	% Inhibition BRD3731 10μM	IC_{50}(μM)	Fold selectivity
FGFR3(K650M)	0.8		
PIM2	0.8		
FGFR3(K650E)	0.7		
PBK	0.6		
PAK4	0.6		
MAP3K5_Cascade	0.4		
FES	0.4		
MLK2_Cascade	0.3		
CaMK2β	0.3		
FGFR1(V561M)	0.3		
BTK	0.3		
ALK(F1174L)	0.2		
IKKβ	0.2		
IRAK4	0.1		
EPHB3	0.1		
FGFR4(V550E)	0.1		
MET(D1228H)	0.0		
NEK6	0.0		
PAK2	0.0		
NEK1	-0.1		
p38β	-0.2		
PRKX	-0.2		
p38δ	-0.2		
LYNa	-0.3		
CaMK2δ	-0.3		
KIT(T670I)	-0.3		
MAP2K2_Cascade	-0.4		
SGK	-0.4		
TBK1	-0.5		
ROCK2	-0.5		
RET(S891A)	-0.6		
MRCKβ	-0.7		
CRIK	-0.7		
PLK1	-0.7		
FGFR3	-0.7		
MAP3K2_Cascade	-0.7		
MET	-0.8		
TSSK1	-0.8		
MLK3_Cascade	-0.8		
NuaK1	-0.9		
LOK	-1.0		
WNK1	-1.0		
AKT1	-1.1		
TNIK	-1.2		
CaMK2γ	-1.2		
EGFR(L858R)	-1.2		
DCAMKL2	-1.3		
ACK	-1.3		
FYN	-1.3		

Kinase	% Inhibition BRD0705 10μM	IC_{50}(μM)	Fold selectivity
MNK2	-5.9		
CK2α1/β	-6.0		
DAPK1	-6.0		
DYRK1B	-6.1		
MARK2	-6.2		
QIK	-6.4		
EEF2K	-6.4		
RSK1	-6.4		
HIPK1	-6.5		
PKCβ1	-6.5		
PDK1	-6.7		
PKD1	-6.8		
CK2α2/β	-7.0		
CLK1	-7.1		
CaMK4	-7.1		
CDC7/ASK	-7.2		
MST1	-7.3		
CGK2	-7.3		
IRAK4	-7.4		
HIPK3	-7.6		
PKACβ	-7.7		
p70S6K	-7.8		
FLT4	-7.9		
Erk5	-7.9		
RSK3	-7.9		
PBK	-8.0		
PKCγ	-8.0		
FMS	-8.2		
AKT1	-8.3		
MAPKAPK3	-8.3		
AKT3	-8.3		
p38α	-8.5		
TSSK1	-8.5		
CaMK2α	-8.6		
CaMK2β	-9.0		
MRCKβ	-9.1		
CDK4/CycD3	-9.1		
FGFR2	-9.2		
NEK1	-9.6		
Erk1	-9.8		
NDR2	-9.9		
MGC42105	-9.9		
EPHB1	-9.9		
PIK3CA/PIK3R1	-10.7		
PAK6	-10.7		
SLK	-10.7		
HER2	-11.1		
CK1γ2	-11.8		
LATS2	-11.9		

Kinase	% Inhibition BRD3731 10μM	IC_{50}(μM)	Fold selectivity
IKKε	-1.4		
IGF1R	-1.5		
KIT	-1.7		
KIT(D816V)	-1.7		
SLK	-1.8		
KIT(V654A)	-1.9		
EPHA8	-1.9		
MARK3	-2.1		
CK1γ3	-2.1		
NPM1-ALK	-2.1		
CK2α1/β	-2.1		
NEK2	-2.1		
RET(M918T)	-2.2		
AurB	-2.3		
YES(T348I)	-2.3		
CK2α2/β	-2.3		
RET(G691S)	-2.3		
MGC42105	-2.4		
ABL(T315I)	-2.4		
JNK3	-2.6		
p38γ	-2.6		
EPHA4	-2.7		
INSR	-2.8		
NuaK2	-2.8		
BRSK2	-2.9		
LATS2	-3.0		
EPHA7	-3.0		
CDC7/ASK	-3.1		
NDR2	-3.2		
NEK7	-3.2		
DAPK1	-3.4		
TYRO3	-3.5		
LTK	-3.5		
NDR1	-3.7		
HGK	-3.8		
BMX	-3.8		
JNK2	-3.9		
EGFR(T790M)	-4.0		
EGFR(T790M/L858R)	-4.0		
MNK1	-4.1		
QIK	-4.1		
CaMK2α	-4.3		
BMPR1A	-4.4		
NEK4	-4.8		
BRAF(V600E)_Cascad	-5.2		
SGK3	-5.2		
EPHA5	-5.5		
BRK	-5.6		
MNK2	-5.6		

Kinase	% Inhibition BRD0705 10μM	IC_{50}(μM)	Fold selectivity
EGFR(d746-750)	-12.0		
PKCθ	-12.0		
PLK1	-12.3		
PLK3	-12.5		
FGFR4	-13.4		
CRIK	-15.2		
FGFR3(K650E)	-15.5		
SPHK1	-20.5		
PKD2	-22.1		
MAPKAPK2	-22.4		
MSK1	-27.1		

Kinase	% Inhibition BRD3731 10μM	IC_{50}(μM)	Fold selectivity
CK1α	-5.6		
PKCη	-5.8		
JNK1	-6.0		
AKT3	-6.4		
RAF1_Cascade	-6.6		
TNK1	-6.7		
EML4-ALK	-7.2		
MAP4K2	-7.5		
MUSK	-7.9		
FGFR4	-8.1		
AKT2	-8.4		
MAP2K3_Cascade	-8.8		
WEE1	-9.1		
MLK1_Cascade	-9.4		
MOS_Cascade	-9.5		
SYK	-11.0		
CHK1	-16.4		
PAK1	-18.6		
PAK6	-46.8		

Table S7. Lists of genes differentially expressed based on an absolute fold change of RPKM expression ≥ 1.5, a P-value ≤ 0.05, and a FDR ≤ 0.05 between control and BRD0705-treated U937 cells.

Lists of genes with significant changes in expression induced by BRD0705 estimated by absolute fold change of RPKM expression ≥ 1.5, P-value ≤ 0.05, FDR ≤ 0.05, out of the GRCh37/hg19 genes.
The 193 genes with expression down-regulated by BRD0705 are ranked based on the increasing order of fold change of expression (from low to high). The 55 genes with expression up-regulated by BRD0705 are ranked based on the decreasing order of fold change of expression (from high to low).
Columns 4-5 presents the average log2(FPKM) expression across samples treated with DMSO (Control) and BRD0705. Columns 6-10 present the Fold Change, Signal to Noise Ratio (SNR), P-value and FDR scores for log2(FPKM) expression in BRD0705 treated samples vs control. Columns 11-13 present the trend of the change in expression (down = DN, up = UP, unchanged = 0) induced by the treatement with BRD0705, BRD0320 and BRD3731.

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0705	**U937.log2FC.BRD0705.vs.Ctr**	U937.SNR.BRD0705.vs.Ctr	U937.Pvalue.BRD0705.vs.Ctr	U937.FDR.BRD0705.vs.Ctr	**Trend U937.BRD0705.vs.Ctr**	Trend U937.BRD0320.vs.Ctr	Trend U937.BRD3731.vs.Ctr
Genes with expression down-regulated by BRD0705 vs Control											
1	30394	JA760600	4.46	1.12	-3.34	-1.44	0.01	0.01	DN	DN	0
2	9782	DQ599965	3.97	0.66	-3.31	-1.74	0.00	0.01	DN	DN	0
3	6148	P27_CRE	1.89	0.00	-1.89	-1.15	0.04	0.05	DN	DN	0
4	11964	AB062083	2.64	0.84	-1.81	-0.90	0.04	0.05	DN	DN	0
5	30117	DQ571464	2.62	0.84	-1.78	-0.45	0.05	0.05	DN	0	0
6	30588	U4	1.78	0.00	-1.78	-4.37	0.00	0.00	DN	DN	0
7	9307	KIAA0855	3.09	1.48	-1.60	-0.59	0.05	0.04	DN	DN	0
8	12477	SNORD42A	1.60	0.00	-1.60	-3.71	0.00	0.01	DN	DN	0
9	10640	DQ596816	2.27	0.71	-1.56	-0.44	0.05	0.05	DN	0	0
10	11144	DQ598724	1.51	0.00	-1.51	-1.03	0.05	0.04	DN	0	0
11	2609	DQ599872	1.98	0.56	-1.42	-1.01	0.01	0.01	DN	0	0
12	17070	MIR4784	1.42	0.00	-1.42	-4.06	0.00	0.01	DN	0	0
13	23625	LOC100133331	3.37	1.95	-1.41	-1.42	0.01	0.01	DN	DN	0
14	6605	SNORD59A	2.00	0.72	-1.28	-1.53	0.00	0.01	DN	0	0
15	3867	PDCD4	5.37	4.13	-1.25	-7.05	0.00	0.00	DN	DN	DN
16	21066	KLHL24	2.28	1.04	-1.24	-7.88	0.00	0.00	DN	DN	0
17	4065	AL137655	2.69	1.49	-1.20	-1.06	0.00	0.00	DN	DN	0
18	9509	BX537481	1.90	0.73	-1.17	-1.13	0.00	0.01	DN	DN	0
19	15511	SNORD35A	1.63	0.47	-1.16	-1.07	0.00	0.00	DN	0	0
20	28472	PCMTD1	3.17	2.01	-1.16	-4.03	0.01	0.00	DN	DN	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0705	**U937.log2FC.BRD0705.vs.Ctr**	U937.SNR.BRD0705.vs.Ctr	U937.Pvalue.BRD0705.vs.Ctr	U937.FDR.BRD0705.vs.Ctr	**Trend U937.BRD0705.vs.Ctr**	Trend U937.BRD0320.vs.Ctr	Trend U937.BRD3731.vs.Ctr
21	2178	SNORD77	3.27	2.17	-1.09	-1.45	0.00	0.01	DN	0	UP
22	24842	PNRC1	3.58	2.60	-0.98	-2.71	0.00	0.01	DN	DN	DN
23	20672	ABTB1	1.60	0.64	-0.96	-3.66	0.01	0.01	DN	DN	DN
24	18609	MIR647	2.08	1.13	-0.95	-1.62	0.01	0.00	DN	0	0
25	27552	PIK3CG	4.45	3.50	-0.95	-5.12	0.00	0.01	DN	DN	DN
26	18434	SNORD12B	1.60	0.65	-0.94	-1.02	0.01	0.01	DN	0	0
27	9203	FLJ00278	2.87	1.94	-0.93	-0.82	0.01	0.01	DN	DN	0
28	27554	HBP1	3.53	2.60	-0.93	-7.97	0.00	0.00	DN	DN	0
29	15590	SNORD88A	1.46	0.53	-0.92	-1.44	0.01	0.00	DN	0	0
30	7021	SNORD50	3.32	2.45	-0.86	-2.64	0.00	0.01	DN	0	0
31	11873	AK302511	3.68	2.82	-0.86	-1.11	0.01	0.01	DN	DN	0
32	25134	CCDC28A	3.73	2.87	-0.86	-2.96	0.00	0.00	DN	DN	DN
33	28320	BNIP3L	3.98	3.12	-0.86	-4.03	0.01	0.00	DN	DN	DN
34	12973	DQ588732	1.04	0.20	-0.84	-1.18	0.01	0.00	DN	0	0
35	21758	ART3	3.11	2.26	-0.84	-3.31	0.01	0.01	DN	DN	0
36	10993	LOC100288332	4.09	3.27	-0.82	-0.98	0.00	0.00	DN	0	0
37	21773	CCNG2	2.57	1.75	-0.82	-3.86	0.00	0.00	DN	DN	0
38	5987	ING4	2.97	2.16	-0.81	-7.23	0.00	0.00	DN	DN	0
39	8618	ATXN3	3.24	2.43	-0.81	-4.51	0.00	0.01	DN	DN	DN
40	27553	PRKAR2B	3.26	2.46	-0.80	-6.29	0.01	0.00	DN	DN	DN
41	1001	AK298300	2.30	1.52	-0.78	-1.12	0.00	0.01	DN	DN	0
42	13653	AX721193	1.59	0.81	-0.78	-1.38	0.01	0.01	DN	0	0
43	3341	TET1	1.30	0.53	-0.77	-1.42	0.01	0.01	DN	DN	0
44	19985	WDR48	4.22	3.44	-0.77	-10.79	0.00	0.01	DN	DN	DN
45	4076	IFITM1	3.42	2.66	-0.76	-3.32	0.00	0.00	DN	DN	DN
46	6352	SNORA34	0.75	0.00	-0.75	-3.80	0.01	0.01	DN	DN	0
47	15198	CEACAM6	1.16	0.41	-0.75	-2.26	0.01	0.01	DN	DN	DN
48	18206	TP53INP2	3.87	3.12	-0.75	-3.50	0.00	0.01	DN	DN	DN
49	22931	ST8SIA4	3.07	2.32	-0.75	-8.80	0.01	0.01	DN	DN	DN
50	28849	DEPTOR	2.51	1.77	-0.74	-2.13	0.00	0.00	DN	DN	DN
51	1474	PFN1P2	1.68	0.94	-0.73	-0.94	0.00	0.01	DN	DN	0
52	4250	TRIM22	2.53	1.80	-0.73	-3.63	0.00	0.00	DN	DN	0
53	18514	AK093534	2.30	1.58	-0.73	-1.52	0.00	0.00	DN	0	0
54	28477	RB1CC1	4.14	3.41	-0.73	-9.77	0.01	0.01	DN	DN	DN
55	6526	NFE2	2.98	2.27	-0.72	-1.82	0.01	0.00	DN	DN	DN
56	10899	UBALD1	4.36	3.64	-0.72	-5.05	0.00	0.01	DN	DN	DN
57	15195	CEACAM4	2.78	2.06	-0.72	-3.13	0.01	0.00	DN	DN	DN

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0705	**U937.log2FC.BRD0705.vs.Ctr**	U937.SNR.BRD0705.vs.Ctr	U937.Pvalue.BRD0705.vs.Ctr	U937.FDR.BRD0705.vs.Ctr	**Trend U937.BRD0705.vs.Ctr**	Trend U937.BRD0320.vs.Ctr	Trend U937.BRD3731.vs.Ctr
58	19133	P2RX6P	0.72	0.00	-0.72	-3.81	0.00	0.00	DN	DN	0
59	21300	MXD4	2.36	1.64	-0.72	-1.80	0.00	0.01	DN	DN	DN
60	21788	ANTXR2	4.74	4.02	-0.72	-2.70	0.01	0.01	DN	DN	DN
61	29	LOC100130417	1.22	0.51	-0.71	-1.41	0.01	0.00	DN	0	0
62	11872	AX747598	2.87	2.15	-0.71	-1.87	0.01	0.00	DN	DN	0
63	23181	EIF4EBP3	3.03	2.32	-0.71	-1.98	0.01	0.00	DN	DN	0
64	1793	PBXIP1	3.10	2.40	-0.70	-5.70	0.00	0.01	DN	DN	DN
65	12356	LGALS9B	0.82	0.11	-0.70	-6.03	0.00	0.01	DN	DN	0
66	4471	endogenous retrovirus ERV9	1.78	1.10	-0.69	-1.22	0.00	0.00	DN	DN	0
67	8190	MIS18BP1	5.23	4.54	-0.69	-10.95	0.00	0.00	DN	DN	DN
68	13178	YPEL2	2.43	1.74	-0.69	-5.24	0.00	0.01	DN	DN	0
69	17383	SLC40A1	2.01	1.32	-0.69	-2.04	0.01	0.00	DN	DN	0
70	23158	PAIP2	5.82	5.14	-0.68	-4.17	0.00	0.01	DN	DN	DN
71	8134	EAPP	4.13	3.47	-0.67	-2.90	0.01	0.00	DN	DN	DN
72	22163	TLR2	3.07	2.40	-0.67	-2.35	0.01	0.01	DN	DN	0
73	643	AGO4	3.36	2.70	-0.66	-5.88	0.00	0.01	DN	DN	0
74	11200	SNX29P2	3.19	2.53	-0.66	-1.01	0.00	0.00	DN	DN	0
75	18479	FAM210B	3.65	2.99	-0.66	-11.11	0.00	0.01	DN	DN	0
76	26816	C7orf41	2.77	2.11	-0.66	-2.72	0.00	0.00	DN	DN	0
77	4064	LOC100133161	3.48	2.82	-0.65	-0.78	0.01	0.00	DN	DN	0
78	15894	ZNF530	2.34	1.69	-0.65	-0.97	0.00	0.00	DN	0	0
79	27203	GTF2IP1	4.12	3.47	-0.65	-1.72	0.01	0.00	DN	DN	0
80	27411	MIR25	2.50	1.86	-0.65	-1.12	0.00	0.01	DN	DN	0
81	6500	CALCOCO1	2.18	1.54	-0.64	-14.75	0.01	0.00	DN	DN	DN
82	10266	AK055981	2.39	1.76	-0.64	-2.97	0.00	0.01	DN	DN	0
83	13428	UBALD2	4.09	3.45	-0.64	-6.84	0.00	0.00	DN	DN	DN
84	16690	AK057596	3.24	2.60	-0.64	-0.88	0.00	0.01	DN	DN	0
85	17240	DHRS9	2.64	2.00	-0.64	-4.37	0.01	0.01	DN	DN	0
86	21244	FAM157A	2.86	2.22	-0.64	-1.42	0.00	0.00	DN	DN	0
87	1781	SNORA58	2.11	1.48	-0.63	-1.60	0.00	0.01	DN	0	0
88	10743	SPSB3	3.51	2.87	-0.63	-5.31	0.00	0.01	DN	DN	DN
89	13749	CHMP1B	4.14	3.51	-0.63	-4.87	0.01	0.00	DN	DN	DN
90	18622	PCMTD2	3.34	2.71	-0.63	-6.24	0.00	0.01	DN	DN	0
91	28082	AK056623	1.63	1.01	-0.63	-3.81	0.01	0.00	DN	DN	0
92	1462	AL050141	1.56	0.94	-0.62	-1.11	0.00	0.00	DN	0	0
93	9632	CCPG1	6.50	5.88	-0.62	-5.55	0.01	0.01	DN	DN	0
94	12309	USP32P2	1.31	0.69	-0.62	-1.65	0.01	0.00	DN	DN	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0705	**U937.log2FC.BRD0705.vs.Ctr**	U937.SNR.BRD0705.vs.Ctr	U937.Pvalue.BRD0705.vs.Ctr	U937.FDR.BRD0705.vs.Ctr	**Trend U937.BRD0705.vs.Ctr**	Trend U937.BRD0320.vs.Ctr	Trend U937.BRD3731.vs.Ctr
95	20367	FOXP1	3.13	2.51	-0.62	-2.81	0.01	0.01	DN	DN	0
96	3706	FRAT1	2.59	1.99	-0.61	-3.39	0.01	0.01	DN	DN	DN
97	10881	NLRC3	2.68	2.07	-0.61	-6.48	0.01	0.01	DN	DN	DN
98	12579	RAD51D	1.33	0.72	-0.61	-1.28	0.01	0.01	DN	0	0
99	13112	MBTD1	3.30	2.69	-0.61	-4.30	0.01	0.00	DN	DN	0
100	21337	CYTL1	1.88	1.27	-0.61	-2.04	0.00	0.00	DN	0	0
101	593	TSSK3	2.09	1.49	-0.60	-2.17	0.00	0.00	DN	DN	0
102	692	MACF1	4.37	3.77	-0.60	-1.28	0.01	0.00	DN	DN	0
103	16367	AK311113	2.56	1.96	-0.60	-0.82	0.00	0.00	DN	0	0
104	21529	UGDH-AS1	3.52	2.92	-0.60	-1.16	0.01	0.01	DN	0	0
105	22449	ROPN1L	2.09	1.49	-0.60	-2.32	0.01	0.00	DN	DN	DN
106	997	PDE4B	2.57	1.99	-0.59	-3.02	0.00	0.00	DN	DN	0
107	1191	RWDD3	3.00	2.41	-0.59	-2.27	0.00	0.00	DN	DN	0
108	9634	FLJ27352	1.90	1.31	-0.59	-1.57	0.00	0.01	DN	DN	0
109	13967	RAB27B	4.14	3.55	-0.59	-8.02	0.00	0.01	DN	DN	0
110	20021	NKTR	4.11	3.52	-0.59	-1.41	0.00	0.01	DN	DN	0
111	20067	LZTFL1	3.73	3.14	-0.59	-4.12	0.01	0.00	DN	DN	0
112	22827	JMY	1.13	0.53	-0.59	-3.22	0.00	0.00	DN	DN	0
113	31780	CD24	2.13	1.53	-0.59	-2.11	0.00	0.00	DN	DN	0
114	1516	NBPF24	1.95	1.37	-0.58	-1.74	0.00	0.01	DN	DN	0
115	9332	BC037952	3.70	3.12	-0.58	-0.85	0.00	0.00	DN	DN	0
116	10729	CCDC154	2.18	1.60	-0.58	-1.56	0.01	0.00	DN	DN	0
117	15190	B3GNT8	2.75	2.17	-0.58	-4.29	0.00	0.01	DN	DN	DN
118	17478	FAM117B	1.91	1.33	-0.58	-6.27	0.00	0.00	DN	DN	0
119	20601	GOLGB1	2.90	2.32	-0.58	-2.73	0.01	0.01	DN	DN	0
120	29365	TPM2	3.60	3.02	-0.58	-1.14	0.00	0.00	DN	DN	0
121	29502	DQ594366	4.12	3.55	-0.58	-0.77	0.01	0.01	DN	DN	0
122	448	NIPAL3	2.32	1.75	-0.57	-3.69	0.00	0.01	DN	DN	0
123	3896	ABLIM1	2.47	1.90	-0.57	-3.87	0.00	0.01	DN	DN	0
124	9623	FAM214A	1.84	1.27	-0.57	-1.97	0.01	0.01	DN	DN	0
125	19287	CCDC117	3.96	3.39	-0.57	-5.60	0.00	0.01	DN	DN	0
126	21432	MGC4836	3.63	3.06	-0.57	-1.06	0.01	0.00	DN	DN	0
127	24274	RXRB	4.57	4.00	-0.57	-2.37	0.01	0.00	DN	DN	0
128	6096	CLEC12B	3.24	2.67	-0.56	-2.38	0.00	0.00	DN	DN	0
129	6224	LRMP	2.85	2.29	-0.56	-4.14	0.00	0.01	DN	DN	0
130	8505	SPTLC2	4.07	3.51	-0.56	-7.08	0.00	0.01	DN	DN	0
131	9012	GOLGA8S	3.26	2.70	-0.56	-2.88	0.01	0.01	DN	DN	UP

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0705	**U937.log2FC.BRD0705.vs.Ctr**	U937.SNR.BRD0705.vs.Ctr	U937.Pvalue.BRD0705.vs.Ctr	U937.FDR.BRD0705.vs.Ctr	**Trend U937.BRD0705.vs.Ctr**	Trend U937.BRD0320.vs.Ctr	Trend U937.BRD3731.vs.Ctr
132	11714	NUDT7	2.78	2.22	-0.56	-2.14	0.00	0.00	DN	DN	0
133	19903	NR1D2	3.11	2.54	-0.56	-2.83	0.01	0.01	DN	DN	0
134	23864	BTN3A1	1.61	1.04	-0.56	-2.40	0.00	0.01	DN	DN	0
135	28017	NUB1	4.79	4.23	-0.56	-2.39	0.01	0.01	DN	DN	DN
136	30143	ZER1	2.16	1.60	-0.56	-4.02	0.01	0.00	DN	DN	DN
137	13877	KIAA1328	3.25	2.70	-0.55	-1.13	0.01	0.01	DN	DN	0
138	15782	KIR3DX1	1.23	0.68	-0.55	-2.81	0.00	0.00	DN	DN	0
139	19165	YPEL1	1.33	0.78	-0.55	-2.79	0.01	0.00	DN	DN	0
140	26587	GPR146	1.42	0.87	-0.55	-3.30	0.00	0.00	DN	DN	0
141	28385	RNF122	1.83	1.28	-0.55	-1.40	0.00	0.01	DN	DN	0
142	29717	AUH	2.71	2.17	-0.55	-1.59	0.00	0.01	DN	DN	DN
143	31231	MORC4	4.69	4.14	-0.55	-1.18	0.01	0.01	DN	DN	0
144	381	PINK1	3.68	3.14	-0.54	-5.64	0.00	0.01	DN	DN	DN
145	507	WDTC1	3.71	3.17	-0.54	-9.31	0.00	0.00	DN	DN	DN
146	1816	THBS3	1.89	1.35	-0.54	-1.52	0.01	0.00	DN	DN	0
147	6370	RHEBL1	2.51	1.96	-0.54	-1.20	0.00	0.00	DN	DN	0
148	7934	ANG	0.98	0.45	-0.54	-1.15	0.01	0.01	DN	0	0
149	8368	TMEM229B	3.51	2.97	-0.54	-1.25	0.00	0.00	DN	DN	0
150	8509	C14orf178	0.77	0.23	-0.54	-1.68	0.00	0.00	DN	0	0
151	10951	RMI2	4.73	4.19	-0.54	-8.84	0.01	0.01	DN	DN	0
152	22869	AK023417	1.28	0.74	-0.54	-0.98	0.00	0.00	DN	0	0
153	27892	FAM115C	0.91	0.37	-0.54	-1.90	0.00	0.00	DN	0	0
154	28352	DQ595103	2.55	2.02	-0.54	-1.09	0.01	0.00	DN	0	0
155	30993	mir-223	3.60	3.06	-0.54	-1.27	0.01	0.00	DN	DN	0
156	9144	WHAMMP2	2.82	2.29	-0.53	-1.70	0.00	0.01	DN	DN	0
157	10192	DQ586822	1.33	0.80	-0.53	-1.35	0.00	0.01	DN	DN	0
158	16628	LOC285074	2.66	2.13	-0.53	-1.10	0.00	0.00	DN	DN	0
159	19738	CRBN	4.30	3.77	-0.53	-2.53	0.00	0.00	DN	DN	0
160	20456	TMEM45A	3.46	2.93	-0.53	-1.05	0.01	0.01	DN	DN	0
161	22021	KIAA1109	2.38	1.85	-0.53	-1.59	0.01	0.01	DN	0	0
162	25138	HECA	3.40	2.87	-0.53	-4.80	0.00	0.00	DN	DN	0
163	27185	LAT2	6.25	5.72	-0.53	-6.35	0.01	0.00	DN	DN	DN
164	6751	TBC1D15	4.39	3.86	-0.53	-6.53	0.00	0.01	DN	DN	0
165	4923	MS4A7	3.48	2.95	-0.53	-2.77	0.01	0.00	DN	DN	0
166	3899	FAM160B1	3.10	2.57	-0.53	-3.48	0.00	0.00	DN	DN	0
167	2643	CABC1	5.50	4.96	-0.53	-4.23	0.01	0.01	DN	DN	0
168	2547	CENPF	5.65	5.12	-0.53	-2.26	0.00	0.00	DN	DN	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0705	**U937.log2FC.BRD0705.vs.Ctr**	U937.SNR.BRD0705.vs.Ctr	U937.Pvalue.BRD0705.vs.Ctr	U937.FDR.BRD0705.vs.Ctr	**Trend U937.BRD0705.vs.Ctr**	Trend U937.BRD0320.vs.Ctr	Trend U937.BRD3731.vs.Ctr
169	2416	ZBED6	2.16	1.63	-0.53	-1.44	0.00	0.00	DN	DN	0
170	633	BX537811	3.96	3.43	-0.53	-0.80	0.00	0.00	DN	DN	0
171	383	KIF17	2.30	1.77	-0.53	-2.10	0.00	0.00	DN	DN	0
172	21634	AASDH	2.24	1.72	-0.52	-5.19	0.00	0.01	DN	DN	0
173	13209	BCAS3	1.47	0.95	-0.52	-2.12	0.00	0.01	DN	DN	DN
174	12727	FBXL20	1.40	0.88	-0.52	-4.08	0.01	0.00	DN	DN	0
175	7430	CCNA1	6.07	5.54	-0.52	-4.70	0.00	0.01	DN	DN	0
176	7146	LOC338799	2.11	1.59	-0.52	-1.10	0.01	0.01	DN	DN	0
177	6650	TSPAN31	1.83	1.31	-0.52	-3.21	0.00	0.00	DN	0	0
178	5562	ATM	3.22	2.69	-0.52	-2.33	0.00	0.01	DN	DN	0
179	5111	NEAT1	3.30	2.78	-0.52	-1.19	0.01	0.00	DN	0	0
180	2387	KDM5B	4.76	4.24	-0.52	-3.40	0.01	0.01	DN	DN	0
181	25009	C6orf170	1.27	0.75	-0.51	-1.81	0.00	0.00	DN	0	0
182	20818	XRN1	2.57	2.06	-0.51	-2.83	0.00	0.00	DN	DN	0
183	18461	ATP9A	2.66	2.15	-0.51	-3.93	0.01	0.01	DN	DN	0
184	17284	CIR1	4.64	4.13	-0.51	-3.57	0.00	0.00	DN	DN	DN
185	11027	SMG1	3.61	3.10	-0.51	-1.34	0.01	0.01	DN	DN	0
186	10146	UBE2Q2P2	1.52	1.00	-0.51	-1.19	0.01	0.01	DN	0	0
187	8216	SOS2	3.38	2.87	-0.51	-2.08	0.01	0.00	DN	DN	DN
188	8161	MIPOL1	2.08	1.57	-0.51	-1.06	0.01	0.01	DN	DN	0
189	6324	SLC38A2	5.14	4.63	-0.51	-8.05	0.01	0.00	DN	DN	0
190	1771	CREB3L4	2.71	2.20	-0.51	-2.70	0.00	0.00	DN	DN	0
191	28	AK056486	1.83	1.32	-0.51	-0.87	0.01	0.00	DN	DN	0
192	7792	TNFSF13B	6.80	6.30	-0.50	-3.57	0.01	0.01	DN	DN	0
193	6	LOC729737	4.49	3.99	-0.50	-0.81	0.00	0.01	DN	DN	0
Genes with expression up-regulated by BRD0705 vs Control											
1	30318	MIR4292	1.28	3.13	1.85	1.19	0.01	0.01	UP	0	0
2	10457	DQ595494	0.00	1.46	1.46	1.43	0.00	0.00	UP	0	0
3	1970	CD48	2.01	3.30	1.29	6.43	0.00	0.01	UP	UP	UP
4	27219	PMS2L2	1.18	2.35	1.17	1.72	0.01	0.01	UP	0	0
5	12610	CCL3	0.79	1.88	1.08	3.27	0.00	0.01	UP	UP	0
6	19301	MIR3653	0.46	1.55	1.08	1.31	0.00	0.01	UP	0	0
7	17913	MIR1292	0.87	1.91	1.04	1.26	0.01	0.00	UP	0	0
8	15388	C5AR1	1.08	2.04	0.96	5.18	0.01	0.01	UP	UP	0
9	23821	HIST1H3C	0.82	1.78	0.96	0.87	0.01	0.00	UP	0	0
10	2049	OLFML2B	2.69	3.62	0.93	11.65	0.00	0.01	UP	UP	UP

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0705	**U937.log2FC.BRD0705.vs.Ctr**	U937.SNR.BRD0705.vs.Ctr	U937.Pvalue.BRD0705.vs.Ctr	U937.FDR.BRD0705.vs.Ctr	**Trend U937.BRD0705.vs.Ctr**	Trend U937.BRD0320.vs.Ctr	Trend U937.BRD3731.vs.Ctr
11	23921	HIST1H4I	0.52	1.44	0.92	0.81	0.01	0.00	UP	0	0
12	29086	LRRC24	0.57	1.46	0.89	0.98	0.00	0.00	UP	0	0
13	110	TNFRSF14	2.85	3.71	0.86	6.13	0.00	0.00	UP	UP	UP
14	4144	CTSD	10.08	10.95	0.86	18.43	0.01	0.00	UP	UP	UP
15	24487	CDKN1A	1.80	2.63	0.83	3.82	0.00	0.00	UP	UP	0
16	18307	MAFB	1.46	2.25	0.79	6.67	0.01	0.00	UP	UP	0
17	3385	DDIT4	4.08	4.85	0.77	2.79	0.01	0.01	UP	UP	0
18	19385	HMOX1	2.36	3.09	0.73	3.82	0.01	0.01	UP	UP	UP
19	29824	TBC1D2	4.04	4.74	0.70	10.72	0.00	0.01	UP	UP	UP
20	23832	HIST1H4D	0.25	0.93	0.69	1.07	0.00	0.01	UP	0	0
21	11746	OSGIN1	1.79	2.47	0.68	2.28	0.01	0.01	UP	UP	0
22	12100	CD68	5.84	6.52	0.68	7.10	0.01	0.01	UP	UP	UP
23	950	JUN	3.35	4.00	0.65	10.91	0.00	0.01	UP	UP	UP
24	11667	HP	1.16	1.81	0.65	3.60	0.01	0.01	UP	UP	UP
25	23999	FKSG63	3.87	4.52	0.65	3.65	0.00	0.00	UP	UP	0
26	2276	NCF2	3.31	3.95	0.64	4.27	0.01	0.01	UP	UP	UP
27	14693	ABHD8	2.61	3.25	0.64	8.11	0.00	0.01	UP	UP	0
28	24218	NEU1	5.51	6.15	0.64	10.29	0.00	0.00	UP	UP	UP
29	14723	IFI30	7.07	7.69	0.62	5.34	0.01	0.00	UP	UP	UP
30	21212	TM4SF19-TCTEX1D2	1.21	1.82	0.61	1.79	0.00	0.00	UP	UP	0
31	1971	SLAMF7	0.21	0.80	0.60	2.11	0.01	0.00	UP	UP	0
32	23157	SNORA74A	0.13	0.73	0.60	1.51	0.00	0.00	UP	0	0
33	28615	LY96	1.66	2.26	0.60	2.35	0.01	0.00	UP	UP	UP
34	6652	DM110804	6.24	6.83	0.59	1.11	0.00	0.01	UP	0	0
35	18986	AK022914	0.61	1.20	0.59	1.48	0.00	0.00	UP	0	0
36	11404	NOD2	1.16	1.74	0.58	1.31	0.01	0.00	UP	UP	0
37	8897	NUDT14	3.42	3.99	0.57	1.89	0.01	0.01	UP	UP	0
38	13505	SLC26A11	0.56	1.11	0.56	4.27	0.00	0.01	UP	UP	0
39	13540	TSPAN10	2.41	2.97	0.55	1.31	0.01	0.01	UP	UP	UP
40	15304	ZNF296	2.91	3.46	0.55	4.72	0.01	0.01	UP	UP	0
41	16918	MARCO	2.84	3.39	0.55	2.80	0.01	0.00	UP	UP	UP
42	3438	PLAU	4.14	4.68	0.54	8.83	0.00	0.00	UP	UP	UP
43	4567	CD82	5.35	5.89	0.54	3.90	0.00	0.01	UP	UP	UP
44	7297	GJB2	4.26	4.80	0.54	3.07	0.00	0.01	UP	UP	UP
45	15997	ID2	5.19	5.73	0.54	3.47	0.01	0.00	UP	UP	0
46	21203	TFRC	5.67	6.21	0.54	6.56	0.00	0.01	UP	UP	UP
47	4990	B3GAT3	4.06	4.58	0.53	3.75	0.01	0.00	UP	UP	UP

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0705	**U937.log2FC.BRD0705.vs.Ctr**	U937.SNR.BRD0705.vs.Ctr	U937.Pvalue.BRD0705.vs.Ctr	U937.FDR.BRD0705.vs.Ctr	**Trend U937.BRD0705.vs.Ctr**	Trend U937.BRD0320.vs.Ctr	Trend U937.BRD3731.vs.Ctr
48	18446	CEBPB	5.08	5.61	0.53	4.86	0.00	0.00	UP	UP	0
49	27207	AL831977	0.00	0.52	0.52	3.63	0.00	0.01	UP	0	0
50	28959	ST3GAL1	3.92	4.44	0.52	4.14	0.00	0.00	UP	UP	UP
51	1990	FCER1G	6.78	7.29	0.51	5.93	0.01	0.01	UP	UP	0
52	10794	AMDHD2	2.90	3.42	0.51	2.09	0.01	0.00	UP	UP	0
53	18443	SNAI1	1.94	2.45	0.51	2.31	0.01	0.01	UP	UP	0
54	28785	KLF10	2.84	3.35	0.51	2.65	0.01	0.01	UP	UP	0
55	4173	SLC22A18	3.40	3.90	0.50	2.41	0.00	0.01	UP	UP	0

Table S8. Lists of genes differentially expressed based on an absolute fold change of RPKM expression ≥ 1.5, a P-value ≤ 0.05, and a FDR ≤ 0.05 between control and BRD3731-treated U937 cells.

Lists of genes with significant changes in expression induced by the GSK3B inhibitor BRD3731 estimated by absolute fold change of RPKM expression ≥ 1.5, P-value ≤ 0.05, FDR ≤ 0.05, out of the GRCh37/hg19 genes.
The 203 genes with expression down-regulated by BRD3731 are ranked based on the increasing order of fold change of expression (from low to high). The 187 genes with expression up-regulated by BRD3731 are ranked based on the decreasing order of fold change of expression (from high to low).
Columns 4-5 presents the average log2(FPKM) expression across samples treated with DMSO (Control) and BRD3731. Columns 6-10 present the Fold Change, Signal to Noise Ratio (SNR), P-value and FDR scores for log2(FPKM) expression in BRD3731 treated samples vs control. Columns 11-13 present the trend of the change in expression (down = DN, up = UP, unchanged = 0) induced by the treatement with BRD0705, BRD0320 and BRD3731.

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD3731	**U937.log2FC.BRD3731.vs.Ctr**	U937.SNR.BRD3731.vs.Ctr	U937.Pvalue.BRD3731.vs.Ctr	U937.FDR.BRD3731.vs.Ctr	Trend U937.BRD0705.vs.Ctr	Trend U937.BRD0320.vs.Ctr	**Trend U937.BRD3731.vs.Ctr**
Genes with expression down-regulated by BRD3731 vs Control											
1	5055	SERPINB2	7.68	5.70	-1.97	-8.10	0.00	0.02	0	UP	DN
2	653361	NCF1	2.56	0.85	-1.72	-6.66	0.00	0.02	0	DN	DN
3	4778	NFE2	3.40	1.69	-1.71	-9.54	0.00	0.00	DN	DN	DN
4	53831	GPR84	3.34	1.80	-1.54	-5.55	0.00	0.02	0	0	DN
5	124402	UBALD1	4.95	3.48	-1.47	-15.87	0.00	0.00	DN	DN	DN
6	654816	NCF1B	1.76	0.32	-1.44	-10.31	0.00	0.01	0	DN	DN
7	4680	CEACAM6	1.61	0.18	-1.43	-10.20	0.00	0.00	DN	DN	DN
8	100302237	MIR1281	2.60	1.21	-1.38	-3.81	0.00	0.03	0	0	DN
9	283991	UBALD2	3.91	2.56	-1.35	-8.15	0.00	0.03	DN	DN	DN
10	2529	FUT7	3.89	2.57	-1.31	-13.10	0.00	0.02	0	DN	DN
11	654817	NCF1C	1.70	0.39	-1.31	-8.14	0.00	0.02	0	DN	DN
12	57491	AHRR	2.61	1.34	-1.27	-8.84	0.00	0.01	0	0	DN
13	10602	CDC42EP3	4.69	3.43	-1.26	-10.28	0.00	0.01	0	0	DN
14	25946	ZNF385A	2.62	1.44	-1.17	-10.51	0.00	0.03	0	DN	DN
15	290	ANPEP	6.50	5.35	-1.15	-36.82	0.00	0.01	0	0	DN
16	1089	CEACAM4	3.23	2.09	-1.15	-4.26	0.00	0.02	DN	DN	DN
17	9002	F2RL3	2.93	1.78	-1.15	-5.51	0.00	0.03	0	UP	DN
18	283663	LINC00926	5.68	4.59	-1.09	-8.03	0.00	0.02	0	0	DN
19	2517	FUCA1	4.58	3.49	-1.09	-10.49	0.00	0.01	0	UP	DN
20	197358	NLRC3	2.94	1.86	-1.08	-27.67	0.00	0.00	DN	DN	DN

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD3731	**U937.log2FC.BRD3731.vs.Ctr**	U937.SNR.BRD3731.vs.Ctr	U937.Pvalue.BRD3731.vs.Ctr	U937.FDR.BRD3731.vs.Ctr	Trend U937.BRD0705.vs.Ctr	Trend U937.BRD0320.vs.Ctr	**Trend U937.BRD3731.vs.Ctr**
21	90427	BMF	1.94	0.89	-1.05	-8.92	0.00	0.01	0	0	DN
22	8111	GPR68	1.34	0.29	-1.05	-5.08	0.00	0.02	0	UP	DN
23	23136	EPB41L3	3.90	2.85	-1.05	-10.38	0.00	0.02	0	0	DN
24	8519	IFITM1	2.92	1.91	-1.01	-8.75	0.00	0.02	DN	DN	DN
25	64092	SAMSN1	2.35	1.34	-1.00	-4.54	0.01	0.05	0	UP	DN
26	na	SMIM24	1.86	0.87	-0.99	-5.13	0.00	0.01	0	0	DN
27	65018	PINK1	1.78	0.81	-0.97	-11.08	0.00	0.00	DN	DN	DN
28	3683	ITGAL	4.42	3.45	-0.97	-12.13	0.00	0.01	0	0	DN
29	10461	MERTK	3.44	2.47	-0.97	-5.26	0.00	0.02	0	0	DN
30	10608	MXD4	2.32	1.35	-0.97	-15.53	0.00	0.01	DN	DN	DN
31	10501	SEMA6B	3.53	2.57	-0.96	-13.05	0.00	0.01	0	UP	DN
32	58476	TP53INP2	2.64	1.69	-0.95	-11.48	0.00	0.00	DN	DN	DN
33	64386	MMP25	2.18	1.23	-0.95	-19.29	0.00	0.01	0	DN	DN
34	1543	CYP1A1	1.43	0.49	-0.94	-5.73	0.00	0.01	0	UP	DN
35	5763	PTMS	5.41	4.47	-0.94	-13.47	0.00	0.00	0	0	DN
36	145788	C15orf65	2.18	1.26	-0.92	-4.08	0.00	0.03	0	0	DN
37	1880	GPR183	4.98	4.06	-0.92	-3.57	0.00	0.03	0	UP	DN
38	404217	CTXN1	3.86	2.96	-0.90	-3.02	0.00	0.04	0	DN	DN
39	7903	ST8SIA4	2.34	1.44	-0.90	-17.08	0.00	0.01	DN	DN	DN
40	10397	NDRG1	5.54	4.65	-0.89	-7.07	0.00	0.01	0	DN	DN
41	5294	PIK3CG	4.44	3.56	-0.88	-5.08	0.01	0.04	DN	DN	DN
42	978	CDA	5.86	4.99	-0.88	-12.78	0.00	0.00	0	DN	DN
43	29785	CYP2S1	3.01	2.15	-0.87	-5.81	0.00	0.02	0	0	DN
44	374907	B3GNT8	2.27	1.42	-0.85	-4.54	0.00	0.02	DN	DN	DN
45	2204	FCAR	3.79	2.94	-0.85	-4.64	0.01	0.04	0	UP	DN
46	51247	PAIP2	5.37	4.53	-0.84	-12.57	0.00	0.00	DN	DN	DN
47	54855	FAM46C	2.55	1.71	-0.84	-3.50	0.00	0.03	0	DN	DN
48	55081	IFT57	4.95	4.11	-0.84	-12.58	0.00	0.02	0	DN	DN
49	1958	EGR1	1.83	0.99	-0.84	-3.21	0.00	0.02	0	0	DN
50	241	ALOX5AP	6.48	5.64	-0.83	-12.58	0.00	0.01	0	0	DN
51	51667	NUB1	3.77	2.94	-0.83	-7.28	0.00	0.03	DN	DN	DN
52	27250	PDCD4	4.12	3.29	-0.83	-20.71	0.00	0.00	DN	DN	DN
53	11031	RAB31	5.51	4.68	-0.83	-6.91	0.00	0.02	0	DN	DN
54	7462	LAT2	6.56	5.74	-0.83	-16.64	0.00	0.00	DN	DN	DN
55	118429	ANTXR2	3.12	2.30	-0.82	-6.41	0.00	0.01	DN	DN	DN
56	4046	LSP1	4.98	4.16	-0.82	-10.75	0.00	0.00	0	0	DN
57	5577	PRKAR2B	3.10	2.28	-0.82	-9.69	0.00	0.03	DN	DN	DN

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD3731	**U937.log2FC.BRD3731.vs.Ctr**	U937.SNR.BRD3731.vs.Ctr	U937.Pvalue.BRD3731.vs.Ctr	U937.FDR.BRD3731.vs.Ctr	Trend U937.BRD0705.vs.Ctr	Trend U937.BRD0320.vs.Ctr	**Trend U937.BRD3731.vs.Ctr**
58	54039	PCBP3	4.00	3.18	-0.82	-5.67	0.00	0.01	0	0	DN
59	1746	DLX2	2.38	1.57	-0.81	-6.15	0.00	0.02	0	0	DN
60	10409	BASP1	5.55	4.74	-0.80	-4.23	0.00	0.02	0	0	DN
61	80774	LIMD2	2.99	2.22	-0.77	-4.63	0.00	0.01	0	DN	DN
62	2354	FOSB	1.83	1.06	-0.77	-3.63	0.00	0.02	0	0	DN
63	81618	ITM2C	4.32	3.55	-0.77	-9.71	0.00	0.02	0	DN	DN
64	222166	MTURN	2.71	1.94	-0.77	-8.99	0.00	0.01	0	0	DN
65	57326	PBXIP1	2.21	1.44	-0.77	-6.75	0.00	0.01	DN	DN	DN
66	9398	CD101	1.11	0.35	-0.76	-5.94	0.00	0.01	0	0	DN
67	64061	TSPYL2	3.49	2.73	-0.76	-7.26	0.00	0.02	0	0	DN
68	23048	FNBP1	4.72	3.96	-0.76	-10.14	0.00	0.03	0	0	DN
69	26207	PITPNC1	3.73	2.97	-0.76	-8.54	0.00	0.01	0	0	DN
70	4609	MYC	8.28	7.53	-0.76	-10.57	0.00	0.01	0	DN	DN
71	4069	LYZ	9.49	8.74	-0.75	-6.76	0.00	0.01	0	DN	DN
72	3550	IK	6.22	5.46	-0.75	-23.24	0.00	0.01	0	DN	DN
73	9644	SH3PXD2A	2.66	1.92	-0.74	-7.46	0.01	0.04	0	UP	DN
74	4318	MMP9	1.80	1.06	-0.74	-5.05	0.01	0.05	0	0	DN
75	55837	EAPP	4.22	3.49	-0.73	-9.15	0.00	0.01	DN	DN	DN
76	100131801	PET100	6.71	5.98	-0.73	-3.08	0.00	0.02	0	0	DN
77	26511	CHIC2	3.07	2.34	-0.73	-7.09	0.00	0.01	0	DN	DN
78	9541	CIR1	4.97	4.25	-0.73	-7.23	0.00	0.01	DN	DN	DN
79	2323	FLT3LG	1.51	0.78	-0.73	-2.72	0.01	0.04	0	0	DN
80	3242	HPD	1.87	1.15	-0.72	-3.12	0.00	0.02	0	0	DN
81	57186	RALGAPA2	2.43	1.70	-0.72	-4.03	0.00	0.02	0	0	DN
82	25901	CCDC28A	3.00	2.28	-0.71	-2.75	0.00	0.03	DN	DN	DN
83	20	ABCA2	1.63	0.91	-0.71	-11.88	0.00	0.00	0	DN	DN
84	na	LOC100507419	1.95	1.24	-0.71	-4.37	0.00	0.02	0	0	DN
85	84232	MAF1	6.08	5.37	-0.71	-12.22	0.00	0.01	0	DN	DN
86	57132	CHMP1B	3.66	2.96	-0.71	-7.25	0.00	0.01	DN	DN	DN
87	23091	ZC3H13	5.06	4.36	-0.70	-4.55	0.01	0.04	0	DN	DN
88	26100	WIPI2	4.64	3.94	-0.70	-16.34	0.00	0.00	0	DN	DN
89	8660	IRS2	4.83	4.13	-0.70	-10.11	0.00	0.00	0	0	DN
90	3137	HLA-J	1.29	0.60	-0.70	-3.60	0.00	0.04	0	0	DN
91	745	MYRF	1.71	1.01	-0.69	-10.68	0.00	0.03	0	DN	DN
92	7791	ZYX	7.82	7.13	-0.69	-9.82	0.00	0.02	0	0	DN
93	55593	OTUD5	4.60	3.92	-0.68	-8.73	0.00	0.02	0	0	DN
94	64005	MYO1G	6.01	5.34	-0.67	-9.17	0.00	0.03	0	UP	DN

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD3731	**U937.log2FC.BRD3731.vs.Ctr**	U937.SNR.BRD3731.vs.Ctr	U937.Pvalue.BRD3731.vs.Ctr	U937.FDR.BRD3731.vs.Ctr	Trend U937.BRD0705.vs.Ctr	Trend U937.BRD0320.vs.Ctr	**Trend U937.BRD3731.vs.Ctr**
95	9938	ARHGAP25	2.69	2.02	-0.67	-4.49	0.00	0.03	0	0	DN
96	3800	KIF5C	1.62	0.96	-0.66	-4.47	0.00	0.02	0	0	DN
97	93349	SP140L	2.68	2.02	-0.66	-4.20	0.00	0.03	0	0	DN
98	56978	PRDM8	1.68	1.03	-0.66	-4.44	0.01	0.05	0	DN	DN
99	57658	CALCOCO1	1.68	1.03	-0.65	-3.55	0.00	0.02	DN	DN	DN
100	23038	WDTC1	3.00	2.34	-0.65	-3.90	0.00	0.02	DN	DN	DN
101	57599	WDR48	3.81	3.15	-0.65	-7.76	0.00	0.02	DN	DN	DN
102	55859	BEX1	8.20	7.55	-0.65	-8.57	0.00	0.03	0	DN	DN
103	10957	PNRC1	2.13	1.48	-0.65	-8.26	0.00	0.01	DN	DN	DN
104	5791	PTPRE	2.96	2.31	-0.65	-4.18	0.01	0.04	0	DN	DN
105	1745	DLX1	6.41	5.77	-0.64	-4.92	0.00	0.03	0	0	DN
106	84941	HSH2D	3.34	2.70	-0.64	-4.66	0.00	0.02	0	DN	DN
107	23533	PIK3R5	3.53	2.89	-0.64	-4.82	0.00	0.02	0	0	DN
108	79895	ATP8B4	4.90	4.26	-0.64	-9.84	0.00	0.03	0	DN	DN
109	1992	SERPINB1	6.59	5.95	-0.64	-5.56	0.00	0.02	0	DN	DN
110	6655	SOS2	2.57	1.93	-0.63	-5.81	0.00	0.02	DN	DN	DN
111	392617	ELFN1	2.36	1.73	-0.63	-4.44	0.00	0.02	0	DN	DN
112	83605	CCM2	4.42	3.79	-0.63	-4.14	0.01	0.04	0	0	DN
113	8233	ZRSR2	3.85	3.22	-0.63	-6.42	0.00	0.03	0	0	DN
114	115019	SLC26A9	4.54	3.92	-0.62	-3.47	0.00	0.02	0	DN	DN
115	9333	TGM5	5.07	4.45	-0.62	-13.16	0.00	0.02	0	0	DN
116	7538	ZFP36	3.41	2.79	-0.62	-3.55	0.00	0.02	0	0	DN
117	359845	FAM101B	6.22	5.60	-0.62	-16.47	0.00	0.01	0	DN	DN
118	10051	SMC4	6.67	6.05	-0.62	-5.07	0.00	0.02	0	DN	DN
119	10444	ZER1	1.73	1.12	-0.62	-2.58	0.01	0.04	DN	DN	DN
120	253738	EBF3	2.12	1.50	-0.62	-5.85	0.00	0.01	0	DN	DN
121	6251	RSU1	5.52	4.90	-0.61	-8.44	0.00	0.01	0	0	DN
122	54997	TESC	7.28	6.67	-0.61	-4.88	0.00	0.02	0	DN	DN
123	56650	CLDND1	5.05	4.45	-0.60	-3.23	0.00	0.02	0	UP	DN
124	8743	TNFSF10	1.19	0.59	-0.60	-4.81	0.00	0.02	0	DN	DN
125	7171	TPM4	7.74	7.14	-0.60	-6.99	0.00	0.02	0	0	DN
126	11168	PSIP1	5.31	4.71	-0.60	-6.15	0.00	0.01	0	DN	DN
127	5064	PALM	1.86	1.26	-0.60	-4.11	0.01	0.04	0	DN	DN
128	5152	PDE9A	2.86	2.27	-0.60	-6.68	0.00	0.01	0	DN	DN
129	79641	ROGDI	4.45	3.86	-0.60	-5.70	0.00	0.01	0	DN	DN
130	10569	SLU7	4.06	3.46	-0.60	-5.40	0.00	0.02	0	DN	DN
131	6920	TCEA3	1.47	0.88	-0.59	-5.67	0.00	0.03	0	0	DN

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD3731	**U937.log2FC.BRD3731.vs.Ctr**	U937.SNR.BRD3731.vs.Ctr	U937.Pvalue.BRD3731.vs.Ctr	U937.FDR.BRD3731.vs.Ctr	Trend U937.BRD0705.vs.Ctr	Trend U937.BRD0320.vs.Ctr	**Trend U937.BRD3731.vs.Ctr**
132	3659	IRF1	2.19	1.60	-0.59	-4.23	0.00	0.02	0	DN	DN
133	10023	FRAT1	1.99	1.40	-0.59	-3.26	0.01	0.04	DN	DN	DN
134	64131	XYLT1	2.23	1.64	-0.59	-3.88	0.00	0.02	0	0	DN
135	549	AUH	2.34	1.75	-0.59	-2.95	0.00	0.04	DN	DN	DN
136	5031	P2RY6	2.08	1.49	-0.58	-4.23	0.00	0.02	0	0	DN
137	26017	FAM32A	7.06	6.48	-0.58	-3.93	0.00	0.02	0	0	DN
138	23130	ATG2A	2.11	1.53	-0.58	-3.80	0.00	0.03	0	DN	DN
139	5212	VIT	1.81	1.23	-0.58	-4.68	0.00	0.03	0	0	DN
140	7040	TGFB1	7.41	6.84	-0.57	-7.75	0.00	0.01	0	0	DN
141	55075	UACA	1.84	1.27	-0.57	-5.95	0.00	0.01	0	DN	DN
142	1316	KLF6	3.39	2.81	-0.57	-4.03	0.00	0.02	0	0	DN
143	9821	RB1CC1	3.54	2.96	-0.57	-3.38	0.00	0.04	DN	DN	DN
144	55320	MIS18BP1	5.01	4.44	-0.57	-3.72	0.00	0.02	DN	DN	DN
145	126308	MOB3A	5.22	4.65	-0.57	-12.94	0.00	0.02	0	0	DN
146	6079	SNORD15A	1.60	1.03	-0.57	-2.67	0.00	0.03	0	0	DN
147	1727	CYB5R3	5.13	4.57	-0.57	-5.25	0.00	0.04	0	0	DN
148	55544	RBM38	6.67	6.11	-0.57	-4.87	0.01	0.04	0	0	DN
149	202309	GAPT	3.60	3.04	-0.56	-4.99	0.00	0.04	0	DN	DN
150	9253	NUMBL	3.73	3.17	-0.56	-5.51	0.00	0.03	0	0	DN
151	3224	HOXC8	1.24	0.68	-0.56	-2.60	0.00	0.03	0	0	DN
152	5836	PYGL	6.75	6.19	-0.56	-33.15	0.00	0.00	0	0	DN
153	83658	DYNLRB1	6.13	5.57	-0.56	-6.36	0.00	0.03	0	0	DN
154	9990	SLC12A6	2.26	1.70	-0.56	-4.59	0.01	0.04	0	0	DN
155	2208	FCER2	5.36	4.80	-0.56	-4.03	0.01	0.05	0	DN	DN
156	665	BNIP3L	3.47	2.91	-0.56	-3.52	0.00	0.02	DN	DN	DN
157	3092	HIP1	3.67	3.12	-0.56	-6.73	0.00	0.01	0	0	DN
158	246184	CDC26	4.61	4.05	-0.56	-2.48	0.01	0.05	0	DN	DN
159	79144	PPDPF	7.16	6.61	-0.55	-3.29	0.01	0.05	0	0	DN
160	3557	IL1RN	3.60	3.05	-0.55	-3.22	0.01	0.04	0	DN	DN
161	6285	S100B	2.15	1.61	-0.55	-2.81	0.01	0.04	0	DN	DN
162	80325	ABTB1	1.07	0.52	-0.55	-3.95	0.00	0.03	DN	DN	DN
163	56920	SEMA3G	2.74	2.20	-0.54	-5.60	0.00	0.01	0	DN	DN
164	8019	BRD3	2.98	2.44	-0.54	-6.80	0.00	0.01	0	DN	DN
165	26509	MYOF	1.16	0.62	-0.54	-7.25	0.00	0.01	0	0	DN
166	54828	BCAS3	1.04	0.50	-0.54	-3.78	0.00	0.02	DN	DN	DN
167	3561	IL2RG	7.32	6.78	-0.54	-17.80	0.00	0.01	0	DN	DN
168	57153	SLC44A2	2.94	2.40	-0.54	-7.29	0.00	0.01	0	DN	DN

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD3731	**U937.log2FC.BRD3731.vs.Ctr**	U937.SNR.BRD3731.vs.Ctr	U937.Pvalue.BRD3731.vs.Ctr	U937.FDR.BRD3731.vs.Ctr	Trend U937.BRD0705.vs.Ctr	Trend U937.BRD0320.vs.Ctr	**Trend U937.BRD3731.vs.Ctr**
169	123803	NTAN1	3.88	3.34	-0.54	-4.34	0.00	0.02	0	0	DN
170	na	CRACR2B	2.25	1.72	-0.54	-2.72	0.00	0.03	0	0	DN
171	83442	SH3BGRL3	8.40	7.87	-0.54	-8.35	0.00	0.02	0	0	DN
172	5757	PTMA	10.98	10.45	-0.53	-5.00	0.00	0.01	0	0	DN
173	8650	NUMB	3.79	3.25	-0.53	-3.57	0.00	0.03	0	DN	DN
174	64798	DEPTOR	2.13	1.60	-0.53	-8.03	0.00	0.03	DN	DN	DN
175	11157	LSM6	5.80	5.27	-0.53	-2.74	0.00	0.03	0	0	DN
176	1536	CYBB	6.02	5.49	-0.53	-6.33	0.00	0.01	0	DN	DN
177	30846	EHD2	1.55	1.02	-0.53	-2.92	0.01	0.04	0	0	DN
178	51347	TAOK3	5.54	5.01	-0.53	-7.64	0.00	0.04	0	0	DN
179	146330	FBXL16	3.24	2.72	-0.53	-3.92	0.00	0.02	0	DN	DN
180	55871	CBWD1	4.02	3.50	-0.53	-3.00	0.01	0.04	0	DN	DN
181	4582	MUC1	1.78	1.25	-0.53	-2.41	0.01	0.04	0	0	DN
182	79733	E2F8	4.65	4.12	-0.53	-4.91	0.01	0.05	0	DN	DN
183	160335	TMTC2	1.44	0.91	-0.53	-3.75	0.00	0.03	0	0	DN
184	7461	CLIP2	2.47	1.95	-0.52	-3.49	0.00	0.02	0	DN	DN
185	220323	OAF	5.61	5.09	-0.52	-6.27	0.01	0.04	0	DN	DN
186	84335	AKT1S1	4.76	4.24	-0.52	-9.21	0.00	0.01	0	0	DN
187	90864	SPSB3	3.46	2.95	-0.52	-2.83	0.01	0.04	DN	DN	DN
188	55454	CSGALNACT2	4.58	4.07	-0.51	-9.58	0.00	0.01	0	DN	DN
189	57713	SFMBT2	3.89	3.37	-0.51	-3.91	0.00	0.02	0	DN	DN
190	83959	SLC4A11	2.22	1.71	-0.51	-3.99	0.00	0.02	0	DN	DN
191	144811	LACC1	2.07	1.56	-0.51	-2.78	0.00	0.03	0	UP	DN
192	83853	ROPN1L	2.07	1.55	-0.51	-4.81	0.00	0.01	DN	DN	DN
193	55893	ZNF395	4.37	3.86	-0.51	-7.58	0.00	0.01	0	DN	DN
194	284273	ZADH2	3.75	3.24	-0.51	-9.20	0.00	0.01	0	DN	DN
195	56977	STOX2	1.58	1.07	-0.51	-6.34	0.00	0.02	0	0	DN
196	26019	UPF2	4.25	3.74	-0.51	-3.98	0.00	0.02	0	DN	DN
197	149076	ZNF362	2.61	2.10	-0.51	-4.87	0.00	0.02	0	DN	DN
198	85313	PPIL4	4.42	3.91	-0.51	-4.50	0.01	0.05	0	0	DN
199	10194	TSHZ1	3.82	3.32	-0.50	-6.51	0.00	0.01	0	DN	DN
200	53827	FXYD5	8.10	7.59	-0.50	-12.19	0.00	0.00	0	0	DN
201	3142	HLX	3.09	2.59	-0.50	-4.15	0.00	0.02	0	0	DN
202	4287	ATXN3	1.77	1.27	-0.50	-4.04	0.00	0.02	DN	DN	DN
203	10370	CITED2	6.43	5.93	-0.50	-6.43	0.00	0.01	0	0	DN

Genes with expression up-regulated by BRD3731 vs Control

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD3731	**U937.log2FC.BRD3731.vs.Ctr**	U937.SNR.BRD3731.vs.Ctr	U937.Pvalue.BRD3731.vs.Ctr	U937.FDR.BRD3731.vs.Ctr	Trend U937.BRD0705.vs.Ctr	Trend U937.BRD0320.vs.Ctr	**Trend U937.BRD3731.vs.Ctr**
1	8764	TNFRSF14	2.21	3.83	1.62	14.65	0.00	0.02	UP	UP	UP
2	51338	MS4A4A	1.31	2.84	1.53	22.96	0.00	0.00	0	UP	UP
3	na	SNORD77	3.30	4.74	1.44	4.61	0.00	0.01	DN	0	UP
4	na	SNORD49A	2.95	4.35	1.40	3.16	0.01	0.04	0	0	UP
5	3336	HSPE1	6.25	7.63	1.37	22.40	0.00	0.00	0	0	UP
6	1509	CTSD	9.49	10.83	1.33	33.33	0.00	0.00	UP	UP	UP
7	na	SNORD80	4.84	6.07	1.23	4.67	0.01	0.05	0	0	UP
8	100500802	MIR3685	0.11	1.33	1.22	4.27	0.00	0.03	0	0	UP
9	55357	TBC1D2	2.53	3.75	1.22	6.91	0.00	0.02	UP	UP	UP
10	26175	TMEM251	2.79	3.98	1.18	6.68	0.00	0.01	0	UP	UP
11	0	RPSAP58	2.83	3.99	1.15	5.65	0.00	0.01	0	0	UP
12	79444	BIRC7	1.60	2.73	1.13	7.37	0.00	0.01	0	UP	UP
13	514	ATP5E	2.24	3.37	1.13	4.23	0.00	0.02	0	0	UP
14	2760	GM2A	4.55	5.67	1.12	16.97	0.00	0.02	0	UP	UP
15	0	SNORD35B	4.17	5.27	1.10	2.74	0.01	0.04	0	UP	UP
16	2706	GJB2	1.55	2.64	1.09	6.95	0.00	0.01	UP	UP	UP
17	123	PLIN2	4.58	5.66	1.08	12.58	0.00	0.01	0	UP	UP
18	83882	TSPAN10	1.04	2.11	1.07	6.76	0.00	0.01	UP	UP	UP
19	732	C8B	0.62	1.61	0.99	4.70	0.00	0.01	0	UP	UP
20	84933	C8orf76	1.30	2.29	0.99	7.65	0.00	0.03	0	0	UP
21	284367	SIGLEC17P	2.91	3.89	0.99	7.15	0.00	0.01	0	UP	UP
22	4861	NPAS1	1.96	2.94	0.98	5.44	0.00	0.01	0	UP	UP
23	968	CD68	4.56	5.53	0.97	16.04	0.00	0.02	UP	UP	UP
24	1777	DNASE2	4.07	5.03	0.96	5.93	0.01	0.04	0	UP	UP
25	8685	MARCO	2.66	3.61	0.95	9.31	0.00	0.03	UP	UP	UP
26	0	SNORD88C	2.00	2.94	0.95	4.14	0.01	0.04	0	0	UP
27	427	ASAH1	6.55	7.48	0.94	12.96	0.00	0.02	0	UP	UP
28	3638	INSIG1	6.11	7.03	0.92	9.97	0.00	0.01	0	0	UP
29	134429	STARD4	2.22	3.12	0.89	4.16	0.00	0.02	0	UP	UP
30	4856	NOV	4.56	5.45	0.89	9.85	0.00	0.01	0	UP	UP
31	6999	TDO2	0.31	1.17	0.87	3.57	0.00	0.02	0	UP	UP
32	0	SNORD36B	2.33	3.19	0.86	2.65	0.00	0.03	0	0	UP
33	5973	RENBP	4.83	5.70	0.86	6.00	0.01	0.04	0	UP	UP
34	4758	NEU1	2.78	3.64	0.86	10.52	0.00	0.02	UP	UP	UP
35	na	SNORD25	4.10	4.96	0.85	2.31	0.01	0.04	0	0	UP
36	10087	COL4A3BP	3.25	4.11	0.85	13.12	0.00	0.00	0	0	UP
37	3162	HMOX1	3.25	4.10	0.85	11.27	0.00	0.01	UP	UP	UP

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD3731	**U937.log2FC.BRD3731.vs.Ctr**	U937.SNR.BRD3731.vs.Ctr	U937.Pvalue.BRD3731.vs.Ctr	U937.FDR.BRD3731.vs.Ctr	Trend U937.BRD0705.vs.Ctr	Trend U937.BRD0320.vs.Ctr	**Trend U937.BRD3731.vs.Ctr**
38	81617	CAB39L	2.84	3.67	0.83	10.21	0.00	0.01	0	0	UP
39	4864	NPC1	5.07	5.90	0.83	10.61	0.00	0.01	0	UP	UP
40	55577	NAGK	3.42	4.25	0.83	5.51	0.01	0.05	0	UP	UP
41	677777	SCARNA12	3.05	3.87	0.83	2.22	0.01	0.04	0	0	UP
42	677792	SNORA1	1.09	1.91	0.82	2.40	0.00	0.04	0	0	UP
43	2752	GLUL	6.47	7.28	0.81	17.95	0.00	0.02	0	UP	UP
44	5734	PTGER4	2.35	3.17	0.81	4.08	0.00	0.02	0	UP	UP
45	5173	PDYN	0.75	1.55	0.80	5.66	0.01	0.04	0	0	UP
46	29760	BLNK	0.89	1.69	0.80	2.59	0.00	0.04	0	UP	UP
47	4688	NCF2	4.13	4.93	0.80	9.01	0.00	0.01	UP	UP	UP
48	54951	COMMD8	4.45	5.24	0.79	6.05	0.00	0.01	0	0	UP
49	84959	UBASH3B	4.15	4.94	0.79	7.88	0.00	0.02	0	0	UP
50	6134	RPL10	8.54	9.32	0.79	11.09	0.00	0.02	0	0	UP
51	3240	HP	1.06	1.84	0.79	4.47	0.00	0.03	UP	UP	UP
52	644591	PPIAL4G	0.30	1.08	0.78	2.39	0.01	0.04	0	0	UP
53	3725	JUN	3.36	4.14	0.78	5.04	0.00	0.04	UP	UP	UP
54	26801	SNORD48	1.91	2.69	0.78	2.96	0.00	0.03	0	0	UP
55	23643	LY96	0.38	1.15	0.77	4.16	0.00	0.02	UP	UP	UP
56	3732	CD82	4.41	5.18	0.77	10.33	0.00	0.00	UP	UP	UP
57	1649	DDIT3	2.64	3.40	0.75	3.98	0.00	0.02	0	UP	UP
58	56342	PPAN	2.45	3.21	0.75	6.77	0.00	0.01	0	0	UP
59	10457	GPNMB	6.68	7.43	0.75	17.45	0.00	0.02	0	UP	UP
60	440574	MINOS1	4.14	4.88	0.74	5.93	0.00	0.02	0	0	UP
61	100129460	DPY19L1P1	1.09	1.83	0.74	5.25	0.00	0.01	0	0	UP
62	10327	AKR1A1	5.83	6.55	0.73	7.74	0.00	0.01	0	0	UP
63	2820	GPD2	2.83	3.56	0.72	5.56	0.00	0.02	0	0	UP
64	10994	ILVBL	4.21	4.93	0.72	7.99	0.00	0.03	0	UP	UP
65	10981	RAB32	4.92	5.64	0.72	7.32	0.00	0.01	0	0	UP
66	23480	SEC61G	6.35	7.06	0.71	4.34	0.00	0.02	0	0	UP
67	54939	COMMD4	4.87	5.58	0.71	5.73	0.01	0.04	0	0	UP
68	6147	RPL23A	8.23	8.92	0.70	9.46	0.00	0.02	0	0	UP
69	116379	IL22RA2	0.92	1.62	0.70	2.79	0.00	0.03	0	0	UP
70	113675	SDSL	2.07	2.76	0.69	4.35	0.00	0.02	0	UP	UP
71	58528	RRAGD	2.49	3.18	0.69	6.15	0.00	0.03	0	UP	UP
72	25798	BRI3	5.90	6.58	0.68	3.56	0.01	0.05	0	UP	UP
73	4712	NDUFB6	4.65	5.33	0.67	7.74	0.00	0.03	0	0	UP
74	6164	RPL34	7.92	8.59	0.67	5.88	0.01	0.04	0	0	UP

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD3731	**U937.log2FC.BRD3731.vs.Ctr**	U937.SNR.BRD3731.vs.Ctr	U937.Pvalue.BRD3731.vs.Ctr	U937.FDR.BRD3731.vs.Ctr	Trend U937.BRD0705.vs.Ctr	Trend U937.BRD0320.vs.Ctr	**Trend U937.BRD3731.vs.Ctr**
75	259307	IL4I1	1.44	2.11	0.67	4.78	0.00	0.03	0	UP	UP
76	na	LOC100505592	0.18	0.85	0.67	2.29	0.01	0.04	0	0	UP
77	8832	CD84	0.71	1.38	0.67	6.45	0.00	0.01	0	0	UP
78	3015	H2AFZ	8.79	9.46	0.67	7.61	0.00	0.01	0	0	UP
79	26799	SNHG5	7.95	8.61	0.66	4.61	0.01	0.04	0	0	UP
80	11068	CYB561D2	2.97	3.63	0.66	4.17	0.00	0.02	0	0	UP
81	64747	MFSD1	5.91	6.57	0.66	10.30	0.00	0.01	0	0	UP
82	4064	CD180	1.47	2.13	0.66	4.35	0.00	0.02	0	UP	UP
83	962	CD48	2.49	3.15	0.66	2.80	0.00	0.04	UP	UP	UP
84	653061	GOLGA8S	2.65	3.30	0.65	8.85	0.00	0.02	DN	DN	UP
85	9450	LY86	2.82	3.46	0.65	2.98	0.00	0.03	0	0	UP
86	na	TYMSOS	1.11	1.76	0.65	2.42	0.01	0.04	0	0	UP
87	64146	PDF	2.29	2.93	0.64	4.97	0.00	0.01	0	0	UP
88	8269	TMEM187	1.29	1.94	0.64	11.12	0.00	0.02	0	UP	UP
89	25903	OLFML2B	1.94	2.59	0.64	5.47	0.01	0.05	UP	UP	UP
90	23753	SDF2L1	5.20	5.84	0.64	3.67	0.00	0.02	0	UP	UP
91	1520	CTSS	3.79	4.43	0.64	7.91	0.00	0.01	0	UP	UP
92	1317	SLC31A1	3.48	4.12	0.64	9.13	0.00	0.03	0	UP	UP
93	153830	RNF145	4.14	4.78	0.64	10.17	0.00	0.03	0	0	UP
94	6307	MSMO1	3.34	3.98	0.64	4.99	0.00	0.02	0	UP	UP
95	23521	RPL13A	6.67	7.31	0.64	43.68	0.00	0.00	0	0	UP
96	51171	HSD17B14	0.62	1.26	0.64	3.57	0.00	0.02	0	UP	UP
97	388325	SCIMP	0.49	1.13	0.64	8.08	0.00	0.01	0	0	UP
98	719	C3AR1	2.02	2.65	0.63	2.62	0.01	0.04	0	UP	UP
99	57464	STRIP2	1.72	2.35	0.63	6.88	0.00	0.01	0	UP	UP
100	8460	TPST1	1.42	2.05	0.63	5.86	0.00	0.02	0	UP	UP
101	3606	IL18	4.09	4.72	0.63	3.77	0.01	0.05	0	0	UP
102	10437	IFI30	6.58	7.20	0.63	5.93	0.00	0.04	UP	UP	UP
103	26151	NAT9	3.15	3.77	0.62	4.26	0.00	0.02	0	UP	UP
104	9956	HS3ST2	5.71	6.32	0.62	11.95	0.00	0.00	0	0	UP
105	10993	SDS	0.72	1.34	0.62	4.58	0.00	0.02	0	UP	UP
106	9056	SLC7A7	1.00	1.61	0.61	4.75	0.00	0.01	0	UP	UP
107	125875	CLDND2	1.89	2.50	0.61	2.30	0.01	0.04	0	0	UP
108	932	MS4A3	5.72	6.33	0.61	17.21	0.00	0.01	0	DN	UP
109	58515	SELK	5.09	5.70	0.61	21.59	0.00	0.01	0	0	UP
110	79012	CAMKV	0.66	1.27	0.61	3.17	0.00	0.02	0	0	UP
111	3956	LGALS1	8.21	8.82	0.61	8.18	0.00	0.01	0	0	UP

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD3731	**U937.log2FC.BRD3731.vs.Ctr**	U937.SNR.BRD3731.vs.Ctr	U937.Pvalue.BRD3731.vs.Ctr	U937.FDR.BRD3731.vs.Ctr	Trend U937.BRD0705.vs.Ctr	Trend U937.BRD0320.vs.Ctr	**Trend U937.BRD3731.vs.Ctr**
112	967	CD63	6.31	6.92	0.61	7.12	0.01	0.04	0	UP	UP
113	389541	LAMTOR4	6.60	7.21	0.60	7.27	0.00	0.03	0	0	UP
114	23503	ZFYVE26	2.41	3.02	0.60	3.22	0.00	0.03	0	UP	UP
115	5328	PLAU	3.82	4.42	0.60	3.40	0.00	0.04	UP	UP	UP
116	26267	FBXO10	1.82	2.42	0.60	4.31	0.00	0.02	0	0	UP
117	113828	FAM83F	1.44	2.04	0.60	2.24	0.01	0.04	0	0	UP
118	55238	SLC38A7	2.00	2.60	0.60	4.94	0.00	0.02	0	UP	UP
119	9446	GSTO1	6.86	7.46	0.60	9.02	0.00	0.01	0	0	UP
120	2101	ESRRA	4.12	4.71	0.60	12.82	0.00	0.01	0	UP	UP
121	253982	ASPHD1	3.54	4.13	0.59	6.21	0.00	0.04	0	0	UP
122	114614	MIR155HG	3.64	4.23	0.59	10.12	0.00	0.02	0	0	UP
123	5003	SLC22A18AS	0.81	1.39	0.58	2.89	0.00	0.03	0	UP	UP
124	4495	MT1G	6.36	6.94	0.58	5.15	0.00	0.01	0	0	UP
125	4818	NKG7	7.42	8.00	0.58	9.29	0.00	0.02	0	UP	UP
126	6482	ST3GAL1	4.22	4.80	0.58	3.34	0.00	0.02	UP	UP	UP
127	219855	SLC37A2	2.71	3.29	0.58	6.57	0.01	0.04	0	0	UP
128	221	ALDH3B1	3.57	4.15	0.57	3.91	0.00	0.03	0	0	UP
129	23475	QPRT	2.89	3.47	0.57	4.48	0.00	0.02	0	0	UP
130	51529	ANAPC11	4.21	4.78	0.57	2.15	0.01	0.04	0	0	UP
131	9978	RBX1	5.63	6.20	0.57	4.06	0.00	0.02	0	0	UP
132	51606	ATP6V1H	4.38	4.95	0.57	5.29	0.00	0.01	0	UP	UP
133	91689	SMDT1	3.44	4.01	0.57	5.57	0.00	0.01	0	0	UP
134	26227	PHGDH	6.59	7.15	0.57	11.82	0.00	0.01	0	UP	UP
135	1632	ECI1	4.33	4.89	0.57	3.13	0.00	0.03	0	0	UP
136	85028	SNHG12	5.32	5.88	0.57	3.42	0.00	0.03	0	UP	UP
137	5806	PTX3	2.34	2.90	0.56	2.69	0.01	0.04	0	UP	UP
138	9784	SNX17	4.75	5.31	0.56	4.94	0.00	0.01	0	0	UP
139	79019	CENPM	4.84	5.40	0.56	4.16	0.01	0.04	0	0	UP
140	23062	GGA2	5.06	5.62	0.56	8.11	0.00	0.01	0	UP	UP
141	0	SNORD58C	2.83	3.39	0.56	6.33	0.00	0.02	0	0	UP
142	57106	NAT14	0.93	1.49	0.56	2.46	0.01	0.05	0	0	UP
143	4669	NAGLU	3.22	3.77	0.56	6.33	0.00	0.01	0	UP	UP
144	10043	TOM1	3.12	3.67	0.56	10.69	0.00	0.02	0	UP	UP
145	5660	PSAP	6.67	7.22	0.55	7.07	0.00	0.03	0	UP	UP
146	4190	MDH1	6.69	7.24	0.55	14.42	0.00	0.01	0	0	UP
147	27342	KCTD7	1.86	2.41	0.55	4.39	0.00	0.01	0	UP	UP
148	84331	FAM195A	5.27	5.82	0.55	2.78	0.00	0.03	0	UP	UP

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD3731	**U937.log2FC.BRD3731.vs.Ctr**	U937.SNR.BRD3731.vs.Ctr	U937.Pvalue.BRD3731.vs.Ctr	U937.FDR.BRD3731.vs.Ctr	Trend U937.BRD0705.vs.Ctr	Trend U937.BRD0320.vs.Ctr	**Trend U937.BRD3731.vs.Ctr**
149	6322	SCML1	2.14	2.68	0.55	5.95	0.01	0.04	0	UP	UP
150	80097	MZT2B	5.66	6.21	0.55	4.15	0.00	0.03	0	0	UP
151	391059	FRRS1	0.83	1.37	0.54	5.60	0.00	0.02	0	UP	UP
152	440145	MZT1	4.69	5.24	0.54	3.00	0.00	0.03	0	0	UP
153	8754	ADAM9	4.17	4.71	0.54	5.96	0.00	0.03	0	UP	UP
154	199713	NLRP7	1.19	1.73	0.54	5.41	0.00	0.03	0	UP	UP
155	8477	GPR65	1.00	1.53	0.54	6.29	0.00	0.02	0	UP	UP
156	na	LOC115110	0.54	1.07	0.53	2.82	0.00	0.04	0	UP	UP
157	29887	SNX10	2.91	3.44	0.53	4.57	0.00	0.04	0	0	UP
158	9315	NREP	4.56	5.09	0.53	14.17	0.00	0.00	0	0	UP
159	84327	ZBED3	2.12	2.65	0.53	3.55	0.01	0.05	0	UP	UP
160	10219	KLRG1	1.15	1.68	0.53	2.56	0.00	0.03	0	0	UP
161	746	TMEM258	6.56	7.08	0.52	2.68	0.01	0.05	0	0	UP
162	26503	SLC17A5	3.01	3.53	0.52	4.55	0.01	0.04	0	UP	UP
163	26229	B3GAT3	3.37	3.90	0.52	3.57	0.00	0.04	UP	UP	UP
164	523	ATP6V1A	3.90	4.42	0.52	5.15	0.01	0.05	0	UP	UP
165	7037	TFRC	6.17	6.69	0.52	5.37	0.00	0.01	UP	UP	UP
166	3156	HMGCR	4.28	4.80	0.52	7.54	0.00	0.01	0	0	UP
167	10007	GNPDA1	4.78	5.30	0.52	8.99	0.00	0.01	0	0	UP
168	4708	NDUFB2	6.12	6.64	0.52	3.40	0.00	0.03	0	0	UP
169	1350	COX7C	7.99	8.51	0.52	4.21	0.00	0.04	0	0	UP
170	10160	FARP1	2.04	2.56	0.52	5.21	0.00	0.01	0	UP	UP
171	22797	TFEC	2.86	3.37	0.52	20.86	0.00	0.00	0	UP	UP
172	na	LOC100506159	4.40	4.91	0.51	2.88	0.00	0.04	0	0	UP
173	5027	P2RX7	1.35	1.86	0.51	5.86	0.00	0.01	0	0	UP
174	29100	TMEM208	4.71	5.23	0.51	2.64	0.01	0.05	0	0	UP
175	26769	GAS5	7.31	7.82	0.51	6.36	0.00	0.01	0	0	UP
176	491	ATP2B2	0.79	1.31	0.51	11.83	0.00	0.00	0	0	UP
177	8613	PPAP2B	0.88	1.38	0.51	2.85	0.00	0.03	0	UP	UP
178	201163	FLCN	3.01	3.52	0.51	6.08	0.00	0.02	0	0	UP
179	79961	DENND2D	4.55	5.06	0.51	7.85	0.00	0.01	0	0	UP
180	6193	RPS5	10.10	10.61	0.50	5.65	0.00	0.02	0	0	UP
181	29968	PSAT1	6.10	6.60	0.50	4.31	0.01	0.05	0	UP	UP
182	126382	NR2C2AP	4.16	4.67	0.50	6.09	0.00	0.03	0	0	UP
183	757	TMEM50B	3.94	4.44	0.50	7.56	0.00	0.01	0	0	UP
184	219833	C11orf45	1.64	2.14	0.50	3.63	0.00	0.02	0	0	UP
185	4891	SLC11A2	2.57	3.07	0.50	4.31	0.00	0.02	0	0	UP

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD3731	**U937.log2FC.BRD3731.vs.Ctr**	U937.SNR.BRD3731.vs.Ctr	U937.Pvalue.BRD3731.vs.Ctr	U937.FDR.BRD3731.vs.Ctr	Trend U937.BRD0705.vs.Ctr	Trend U937.BRD0320.vs.Ctr	**Trend U937.BRD3731.vs.Ctr**
186	55151	TMEM38B	4.04	4.54	0.50	5.53	0.00	0.03	0	0	UP
187	2582	GALE	5.27	5.77	0.50	7.64	0.00	0.03	0	UP	UP

Table S9. Lists of genes differentially expressed based on an absolute fold change of RPKM expression ≥ 1.5, a P-value ≤ 0.05, and a FDR ≤ 0.05 between control and BRD0320-treated U937 cells.

Lists of genes with significant changes in expression induced by the dual GSK3A/GSK3B inhibitor BRD0320 estimated by absolute fold change of RPKM expression ≥ 1.5, P-value ≤ 0.05, FDR ≤ 0.05, out of the GRCh37/hg19 genes.

The 975 genes with expression down-regulated by BRD0320 are ranked based on the increasing order of fold change of expression (from low to high). The 556 genes with expression up-regulated by BRD0320 are ranked based on the decreasing order of fold change of expression (from high to low).

Columns 4-5 presents the average log2(FPKM) expression across samples treated with DMSO (Control) and BRD0320. Columns 6-10 present the Fold Change, Signal to Noise Ratio (SNR), P-value and FDR scores for log2(FPKM) expression in BRD0320 treated samples vs control. Columns 11-13 present the trend of the change in expression (down = DN, up = UP, unchanged = 0) induced by the treatement with the GSK3A inhibitor BRD0705, BRD0320 and BRD3731.

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
Genes with expression down-regulated by BRD0320 vs Control											
1	30394	JA760600	4.46	0.68	-3.77	-2.42	0.00	0.00	DN	DN	0
2	11964	AB062083	2.64	0.00	-2.64	-4.67	0.00	0.01	DN	DN	0
3	9307	KIAA0855	3.09	1.03	-2.06	-0.68	0.04	0.04	DN	DN	0
4	30665	CXorf21	5.30	3.29	-2.02	-13.66	0.00	0.00	0	DN	0
5	27552	PIK3CG	4.45	2.47	-1.98	-15.01	0.01	0.01	DN	DN	DN
6	27553	PRKAR2B	3.26	1.33	-1.93	-8.36	0.01	0.01	DN	DN	DN
7	3867	PDCD4	5.37	3.45	-1.92	-5.39	0.00	0.00	DN	DN	DN
8	6148	P27_CRE	1.89	0.00	-1.89	-1.15	0.04	0.05	DN	DN	0
9	21758	ART3	3.11	1.36	-1.75	-5.96	0.00	0.00	DN	DN	0
10	6526	NFE2	2.98	1.24	-1.74	-7.96	0.01	0.01	DN	DN	DN
11	10899	UBALD1	4.36	2.63	-1.73	-7.41	0.00	0.01	DN	DN	DN
12	28923	MYC	7.30	5.58	-1.72	-30.12	0.01	0.00	0	DN	DN
13	30993	mir-223	3.60	1.91	-1.69	-4.18	0.00	0.00	DN	DN	0
14	27185	LAT2	6.25	4.58	-1.67	-20.33	0.01	0.01	DN	DN	DN
15	20383	MIR4444-1	2.69	1.03	-1.66	-1.28	0.01	0.01	0	DN	0
16	18206	TP53INP2	3.87	2.33	-1.55	-6.99	0.01	0.00	DN	DN	DN
17	28472	PCMTD1	3.17	1.65	-1.52	-4.10	0.00	0.01	DN	DN	0
18	7792	TNFSF13B	6.80	5.28	-1.52	-11.98	0.01	0.01	DN	DN	0
19	24842	PNRC1	3.58	2.07	-1.51	-6.69	0.01	0.01	DN	DN	DN
20	22931	ST8SIA4	3.07	1.56	-1.51	-20.23	0.00	0.00	DN	DN	DN

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
21	26816	C7orf41	2.77	1.27	-1.50	-5.75	0.01	0.01	DN	DN	0
22	11873	AK302511	3.68	2.21	-1.46	-1.32	0.01	0.00	DN	DN	0
23	1163	SNORA66	1.98	0.54	-1.44	-1.01	0.01	0.01	0	DN	0
24	5987	ING4	2.97	1.55	-1.42	-4.99	0.01	0.00	DN	DN	0
25	23158	PAIP2	5.82	4.40	-1.42	-9.32	0.00	0.00	DN	DN	DN
26	12907	ETV4	3.86	2.44	-1.42	-4.00	0.01	0.00	0	DN	0
27	6224	LRMP	2.85	1.46	-1.40	-11.36	0.00	0.01	DN	DN	0
28	15930	MIR4754	1.39	0.00	-1.39	-2.85	0.01	0.00	0	DN	0
29	15195	CEACAM4	2.78	1.40	-1.38	-12.58	0.01	0.01	DN	DN	DN
30	8190	MIS18BP1	5.23	3.86	-1.38	-27.61	0.01	0.00	DN	DN	DN
31	9782	DQ599965	3.97	2.59	-1.37	-0.97	0.00	0.00	DN	DN	0
32	997	PDE4B	2.57	1.21	-1.37	-10.76	0.00	0.00	DN	DN	0
33	8618	ATXN3	3.24	1.88	-1.36	-6.46	0.00	0.00	DN	DN	DN
34	10881	NLRC3	2.68	1.32	-1.36	-7.30	0.00	0.01	DN	DN	DN
35	7358	RASL11A	3.46	2.10	-1.36	-7.98	0.00	0.00	0	DN	0
36	14668	HSH2D	2.76	1.40	-1.36	-5.36	0.00	0.00	0	DN	DN
37	21788	ANTXR2	4.74	3.40	-1.34	-9.14	0.01	0.01	DN	DN	DN
38	10951	RMI2	4.73	3.39	-1.34	-12.13	0.00	0.00	DN	DN	0
39	19985	WDR48	4.22	2.89	-1.33	-11.89	0.01	0.01	DN	DN	DN
40	13178	YPEL2	2.43	1.11	-1.33	-9.82	0.01	0.01	DN	DN	0
41	4250	TRIM22	2.53	1.21	-1.32	-5.45	0.01	0.00	DN	DN	0
42	8368	TMEM229B	3.51	2.21	-1.31	-2.95	0.00	0.01	DN	DN	0
43	4076	IFITM1	3.42	2.12	-1.30	-6.50	0.01	0.01	DN	DN	DN
44	21066	KLHL24	2.28	0.99	-1.29	-9.10	0.01	0.00	DN	DN	0
45	20672	ABTB1	1.60	0.30	-1.29	-5.65	0.01	0.01	DN	DN	DN
46	25134	CCDC28A	3.73	2.45	-1.29	-8.68	0.01	0.00	DN	DN	DN
47	23181	EIF4EBP3	3.03	1.73	-1.29	-2.81	0.00	0.00	DN	DN	0
48	11145	DQ583840	1.62	0.33	-1.29	-1.42	0.01	0.01	0	DN	0
49	28849	DEPTOR	2.51	1.23	-1.27	-5.84	0.01	0.01	DN	DN	DN
50	1793	PBXIP1	3.10	1.83	-1.27	-8.42	0.00	0.01	DN	DN	DN
51	19886	SATB1	6.20	4.93	-1.27	-21.57	0.01	0.00	0	DN	0
52	17383	SLC40A1	2.01	0.75	-1.26	-4.15	0.01	0.00	DN	DN	0
53	21244	FAM157A	2.86	1.59	-1.26	-1.43	0.00	0.00	DN	DN	0
54	3706	FRAT1	2.59	1.35	-1.25	-8.92	0.00	0.01	DN	DN	DN
55	28477	RB1CC1	4.14	2.91	-1.24	-8.84	0.00	0.01	DN	DN	DN
56	14219	C19orf77	2.14	0.90	-1.24	-5.22	0.01	0.00	0	DN	0
57	2643	CABC1	5.50	4.27	-1.23	-17.97	0.01	0.01	DN	DN	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
58	397	HSPG2	2.40	1.17	-1.23	-3.03	0.01	0.01	0	DN	0
59	11872	AX747598	2.87	1.65	-1.22	-3.31	0.01	0.01	DN	DN	0
60	22449	ROPN1L	2.09	0.88	-1.21	-7.20	0.01	0.00	DN	DN	DN
61	12762	IGFBP4	4.38	3.16	-1.21	-18.08	0.00	0.00	0	DN	0
62	13428	UBALD2	4.09	2.88	-1.20	-7.52	0.00	0.00	DN	DN	DN
63	17478	FAM117B	1.91	0.72	-1.20	-11.12	0.01	0.00	DN	DN	0
64	687	MYCBP	4.66	3.47	-1.20	-10.59	0.01	0.01	0	DN	0
65	9502	ATP8B4	5.44	4.23	-1.20	-10.06	0.01	0.01	0	DN	DN
66	19694	MLC1	4.07	2.88	-1.19	-8.01	0.00	0.00	0	DN	0
67	11757	WFDC1	3.36	2.17	-1.19	-4.25	0.01	0.01	0	DN	0
68	28109	DEFB1	5.14	3.95	-1.19	-9.05	0.00	0.01	0	DN	0
69	11714	NUDT7	2.78	1.60	-1.18	-6.54	0.00	0.00	DN	DN	0
70	27191	NCF1	2.97	1.79	-1.18	-23.93	0.00	0.00	0	DN	DN
71	12477	SNORD42A	1.60	0.43	-1.17	-1.00	0.01	0.00	DN	DN	0
72	16379	BCL11A	3.68	2.51	-1.17	-5.11	0.01	0.01	0	DN	0
73	30363	NRARP	2.76	1.59	-1.17	-8.50	0.00	0.01	0	DN	0
74	4065	AL137655	2.69	1.53	-1.16	-1.55	0.00	0.01	DN	DN	0
75	27554	HBP1	3.53	2.37	-1.16	-7.43	0.00	0.01	DN	DN	0
76	643	AGO4	3.36	2.20	-1.16	-8.60	0.01	0.01	DN	DN	0
77	18622	PCMTD2	3.34	2.18	-1.16	-6.34	0.00	0.01	DN	DN	0
78	30335	FUT7	3.71	2.55	-1.16	-18.73	0.01	0.01	0	DN	DN
79	21773	CCNG2	2.57	1.42	-1.15	-6.22	0.01	0.01	DN	DN	0
80	20067	LZTFL1	3.73	2.60	-1.14	-9.63	0.01	0.00	DN	DN	0
81	380	CDA	5.42	4.28	-1.14	-11.11	0.01	0.00	0	DN	DN
82	7759	TMTC4	3.92	2.78	-1.14	-14.48	0.01	0.01	0	DN	0
83	6370	RHEBL1	2.51	1.38	-1.13	-4.71	0.01	0.01	DN	DN	0
84	2283	EDEM3	5.50	4.37	-1.13	-11.45	0.00	0.00	0	DN	0
85	23649	SERPINB1	7.19	6.06	-1.13	-9.73	0.01	0.01	0	DN	DN
86	18479	FAM210B	3.65	2.53	-1.12	-9.61	0.01	0.00	DN	DN	0
87	22163	TLR2	3.07	1.96	-1.11	-2.30	0.01	0.01	DN	DN	0
88	10266	AK055981	2.39	1.29	-1.11	-6.76	0.00	0.00	DN	DN	0
89	9634	FLJ27352	1.90	0.79	-1.11	-2.74	0.00	0.00	DN	DN	0
90	19595	NFAM1	3.68	2.57	-1.11	-9.12	0.01	0.00	0	DN	0
91	23625	LOC100133331	3.37	2.26	-1.10	-0.94	0.01	0.01	DN	DN	0
92	7671	POU4F1	3.33	2.23	-1.10	-7.98	0.00	0.01	0	DN	0
93	17722	SNORD82	1.10	0.00	-1.10	-31.84	0.01	0.01	0	DN	0
94	24447	DQ591995	4.39	3.28	-1.10	-3.99	0.01	0.01	0	DN	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
95	3614	HV303525	1.46	0.36	-1.10	-1.09	0.00	0.01	0	DN	0
96	30588	U4	1.78	0.69	-1.09	-1.09	0.01	0.01	DN	DN	0
97	6	LOC729737	4.49	3.40	-1.09	-1.87	0.00	0.00	DN	DN	0
98	18109	ACSS1	5.63	4.53	-1.09	-14.37	0.00	0.00	0	DN	0
99	9203	FLJ00278	2.87	1.79	-1.08	-1.03	0.00	0.00	DN	DN	0
100	28017	NUB1	4.79	3.72	-1.08	-2.98	0.00	0.01	DN	DN	DN
101	6500	CALCOCO1	2.18	1.11	-1.07	-9.35	0.00	0.00	DN	DN	DN
102	6094	CLEC12A	5.70	4.62	-1.07	-12.51	0.00	0.00	0	DN	0
103	28082	AK056623	1.63	0.57	-1.06	-8.16	0.00	0.00	DN	DN	0
104	20244	SEMA3G	2.08	1.02	-1.06	-11.19	0.00	0.01	0	DN	DN
105	8134	EAPP	4.13	3.09	-1.05	-6.59	0.01	0.00	DN	DN	DN
106	4064	LOC100133161	3.48	2.43	-1.05	-1.31	0.01	0.01	DN	DN	0
107	13112	MBTD1	3.30	2.26	-1.05	-5.43	0.01	0.01	DN	DN	0
108	507	WDTC1	3.71	2.66	-1.05	-15.71	0.01	0.00	DN	DN	DN
109	4923	MS4A7	3.48	2.43	-1.05	-8.57	0.00	0.01	DN	DN	0
110	20488	BBX	3.65	2.60	-1.05	-14.73	0.01	0.01	0	DN	0
111	9509	BX537481	1.90	0.87	-1.03	-0.99	0.01	0.01	DN	DN	0
112	19942	EF565122	1.60	0.57	-1.03	-3.48	0.00	0.01	0	DN	0
113	27203	GTF2IP1	4.12	3.10	-1.02	-3.42	0.01	0.00	DN	DN	0
114	21300	MXD4	2.36	1.35	-1.01	-2.53	0.00	0.00	DN	DN	DN
115	30174	AL049935	5.13	4.12	-1.01	-8.27	0.00	0.01	0	DN	0
116	6089	CD69	4.18	3.17	-1.01	-7.13	0.00	0.00	0	DN	0
117	15198	CEACAM6	1.16	0.16	-1.00	-4.58	0.00	0.00	DN	DN	DN
118	10743	SPSB3	3.51	2.50	-1.00	-11.54	0.01	0.00	DN	DN	DN
119	13967	RAB27B	4.14	3.14	-1.00	-7.57	0.00	0.00	DN	DN	0
120	9221	ULK4P1	1.88	0.88	-1.00	-2.10	0.00	0.01	0	DN	0
121	19612	BIK	3.10	2.10	-1.00	-5.89	0.01	0.00	0	DN	0
122	6530	ZNF385A	2.60	1.59	-1.00	-15.77	0.00	0.00	0	DN	DN
123	31455	ARHGEF6	6.12	5.12	-1.00	-10.61	0.01	0.00	0	DN	0
124	14091	FLJ45445	3.00	2.00	-1.00	-2.35	0.01	0.00	0	DN	0
125	27808	KIAA1147	3.14	2.14	-1.00	-11.65	0.01	0.01	0	DN	0
126	1516	NBPF24	1.95	0.96	-0.99	-2.05	0.00	0.00	DN	DN	0
127	3899	FAM160B1	3.10	2.11	-0.99	-4.68	0.01	0.01	DN	DN	0
128	17896	SIRPD	1.80	0.82	-0.99	-3.21	0.00	0.00	0	DN	0
129	2177	SNORD44	3.66	2.68	-0.99	-1.26	0.00	0.01	0	DN	0
130	30247	BRD3	3.69	2.70	-0.99	-6.89	0.00	0.00	0	DN	DN
131	27202	NCF1C	2.04	1.05	-0.99	-5.23	0.01	0.01	0	DN	DN

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
132	29365	TPM2	3.60	2.62	-0.98	-1.66	0.01	0.01	DN	DN	0
133	2410	ATP2B4	4.59	3.61	-0.98	-11.69	0.01	0.01	0	DN	0
134	6480	ZNF740	3.18	2.21	-0.98	-12.34	0.00	0.01	0	DN	0
135	16308	CRIPT	3.03	2.05	-0.98	-6.56	0.00	0.00	0	DN	0
136	19	DQ575786	0.97	0.00	-0.97	-3.48	0.01	0.00	0	DN	0
137	2591	DQ600234	0.97	0.00	-0.97	-3.48	0.00	0.00	0	DN	0
138	28320	BNIP3L	3.98	3.02	-0.96	-5.47	0.00	0.00	DN	DN	DN
139	31780	CD24	2.13	1.17	-0.96	-3.51	0.01	0.01	DN	DN	0
140	7430	CCNA1	6.07	5.10	-0.96	-10.52	0.01	0.00	DN	DN	0
141	20339	ADAMTS9	2.05	1.09	-0.96	-5.57	0.01	0.00	0	DN	0
142	448	NIPAL3	2.32	1.37	-0.95	-9.27	0.00	0.00	DN	DN	0
143	6096	CLEC12B	3.24	2.29	-0.95	-5.14	0.01	0.00	DN	DN	0
144	8216	SOS2	3.38	2.43	-0.95	-3.20	0.00	0.01	DN	DN	DN
145	15525	Mir_324	1.30	0.34	-0.95	-1.05	0.01	0.01	0	DN	0
146	14367	CTXN1	3.23	2.28	-0.95	-3.92	0.00	0.00	0	DN	DN
147	13244	LIMD2	2.59	1.64	-0.95	-4.29	0.01	0.00	0	DN	DN
148	6696	MSRB3	4.42	3.47	-0.95	-6.26	0.01	0.01	0	DN	0
149	29515	CBWD6	5.18	4.23	-0.95	-2.59	0.00	0.01	0	DN	0
150	9267	GOLGA8O	7.16	6.21	-0.95	-5.15	0.01	0.01	0	DN	0
151	8272	PELI2	2.25	1.31	-0.95	-11.29	0.00	0.01	0	DN	0
152	3341	TET1	1.30	0.36	-0.94	-1.88	0.01	0.00	DN	DN	0
153	593	TSSK3	2.09	1.15	-0.94	-2.87	0.00	0.00	DN	DN	0
154	5726	SORL1	4.45	3.51	-0.94	-6.29	0.00	0.01	0	DN	0
155	22820	SCAMP1	3.96	3.02	-0.94	-15.70	0.00	0.00	0	DN	0
156	23186	TMCO6	3.30	2.36	-0.94	-3.23	0.00	0.00	0	DN	0
157	1001	AK298300	2.30	1.37	-0.93	-1.39	0.01	0.00	DN	DN	0
158	27411	MIR25	2.50	1.57	-0.93	-1.14	0.01	0.00	DN	DN	0
159	16690	AK057596	3.24	2.31	-0.93	-1.24	0.00	0.01	DN	DN	0
160	24446	DQ572964	5.09	4.15	-0.93	-3.70	0.00	0.00	0	DN	0
161	21979	NDST3	1.17	0.24	-0.93	-3.88	0.01	0.00	0	DN	0
162	28081	FBXO25	3.38	2.46	-0.93	-6.51	0.00	0.00	0	DN	0
163	9275	AK310041	2.46	1.53	-0.93	-1.75	0.00	0.00	0	DN	0
164	29717	AUH	2.71	1.79	-0.92	-2.21	0.00	0.01	DN	DN	DN
165	14120	PRTN3	8.66	7.74	-0.92	-14.75	0.01	0.00	0	DN	0
166	10698	FBXL16	3.33	2.40	-0.92	-13.56	0.01	0.00	0	DN	DN
167	13585	NARF	4.52	3.61	-0.92	-5.50	0.01	0.00	0	DN	0
168	10997	KIAA0430	2.65	1.73	-0.92	-20.19	0.00	0.00	0	DN	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
169	9012	GOLGA8S	3.26	2.35	-0.91	-5.05	0.00	0.01	DN	DN	UP
170	21109	DGKG	2.44	1.53	-0.91	-2.65	0.01	0.01	0	DN	0
171	6254	FAR2	4.13	3.22	-0.91	-9.35	0.00	0.00	0	DN	0
172	25129	HEBP2	6.18	5.27	-0.91	-19.73	0.01	0.00	0	DN	0
173	13824	TAF4B	3.51	2.60	-0.91	-12.72	0.01	0.01	0	DN	0
174	26633	WIPI2	4.58	3.68	-0.91	-7.76	0.01	0.00	0	DN	DN
175	23503	RNF44	4.21	3.30	-0.91	-3.46	0.01	0.01	0	DN	0
176	19165	YPEL1	1.33	0.44	-0.90	-5.18	0.00	0.01	DN	DN	0
177	2387	KDM5B	4.76	3.86	-0.90	-5.15	0.00	0.00	DN	DN	0
178	6993	UNG	5.58	4.68	-0.90	-10.03	0.00	0.01	0	DN	0
179	29696	S1PR3	2.94	2.04	-0.90	-5.03	0.01	0.01	0	DN	0
180	25104	MYB	7.89	6.99	-0.90	-13.71	0.00	0.00	0	DN	0
181	16889	CBWD2	5.48	4.58	-0.90	-12.06	0.01	0.01	0	DN	0
182	510	SYTL1	2.78	1.88	-0.90	-3.24	0.01	0.00	0	DN	0
183	29502	DQ594366	4.12	3.23	-0.89	-1.22	0.01	0.01	DN	DN	0
184	23864	BTN3A1	1.61	0.72	-0.89	-2.24	0.00	0.00	DN	DN	0
185	1869	MEF2D	4.63	3.74	-0.89	-5.15	0.00	0.00	0	DN	0
186	21125	ST6GAL1	4.07	3.18	-0.89	-6.11	0.00	0.01	0	DN	0
187	7324	TNFRSF19	1.81	0.93	-0.89	-3.91	0.01	0.01	0	DN	0
188	24274	RXRB	4.57	3.69	-0.88	-3.55	0.00	0.00	DN	DN	0
189	5716	OAF	5.67	4.79	-0.88	-12.14	0.01	0.00	0	DN	DN
190	27728	PODXL	3.97	3.09	-0.88	-9.01	0.01	0.01	0	DN	0
191	12539	EVI2A	3.95	3.07	-0.88	-9.18	0.01	0.00	0	DN	0
192	20367	FOXP1	3.13	2.26	-0.87	-8.09	0.00	0.00	DN	DN	0
193	8505	SPTLC2	4.07	3.19	-0.87	-15.84	0.01	0.00	DN	DN	0
194	30143	ZER1	2.16	1.29	-0.87	-4.86	0.00	0.01	DN	DN	DN
195	30792	MIR221	0.87	0.00	-0.87	-2.93	0.01	0.01	0	DN	0
196	5068	RASGRP2	4.88	4.01	-0.87	-8.64	0.00	0.00	0	DN	0
197	11482	KATNB1	4.15	3.28	-0.87	-6.45	0.01	0.00	0	DN	0
198	11238	DOC2A	2.23	1.36	-0.87	-2.37	0.00	0.00	0	DN	0
199	3920	PDZD8	4.74	3.87	-0.87	-6.39	0.00	0.01	0	DN	0
200	9453	EIF3J-AS1	2.42	1.54	-0.87	-3.42	0.01	0.01	0	DN	0
201	18846	BRWD1	4.22	3.35	-0.87	-6.85	0.00	0.00	0	DN	0
202	1906	CD1D	1.40	0.53	-0.87	-4.50	0.01	0.01	0	DN	0
203	27184	MIR590	1.12	0.25	-0.87	-0.88	0.01	0.01	0	DN	0
204	20306	PXK	6.67	5.81	-0.86	-22.41	0.01	0.00	0	DN	0
205	4847	UBE2L6	5.34	4.49	-0.86	-10.76	0.00	0.01	0	DN	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
206	24844	PM20D2	5.26	4.40	-0.86	-12.26	0.01	0.00	0	DN	0
207	28374	WRN	4.22	3.36	-0.86	-2.14	0.01	0.01	0	DN	0
208	30333	ABCA2	1.37	0.51	-0.86	-4.31	0.01	0.00	0	DN	DN
209	26820	DKFZP586I1420	2.12	1.25	-0.86	-4.14	0.01	0.01	0	DN	0
210	6828	BTG1	3.68	2.82	-0.86	-7.15	0.01	0.01	0	DN	0
211	27328	CDK6	4.95	4.09	-0.86	-5.67	0.01	0.00	0	DN	0
212	3154	CSGALNACT2	5.06	4.20	-0.86	-15.46	0.00	0.00	0	DN	DN
213	15190	B3GNT8	2.75	1.90	-0.85	-3.78	0.01	0.00	DN	DN	DN
214	2547	CENPF	5.65	4.79	-0.85	-3.35	0.01	0.01	DN	DN	0
215	25114	MAP3K5	3.69	2.84	-0.85	-4.04	0.00	0.01	0	DN	0
216	2329	ASPM	3.60	2.75	-0.85	-5.61	0.01	0.00	0	DN	0
217	5080	ATG2A	2.65	1.80	-0.85	-2.57	0.00	0.00	0	DN	DN
218	27198	AK095583	1.28	0.43	-0.85	-1.76	0.01	0.00	0	DN	0
219	1685	TDRKH	2.92	2.07	-0.85	-8.44	0.01	0.01	0	DN	0
220	25277	SNORA20	1.69	0.84	-0.85	-0.80	0.00	0.00	0	DN	0
221	13749	CHMP1B	4.14	3.30	-0.84	-8.21	0.00	0.01	DN	DN	DN
222	28748	SNORA72	2.40	1.56	-0.84	-1.13	0.00	0.00	0	DN	0
223	21443	CD38	2.49	1.65	-0.84	-4.55	0.00	0.00	0	DN	0
224	27157	LOC100093631	3.27	2.43	-0.84	-4.79	0.00	0.01	0	DN	0
225	23862	BTN3A2	2.60	1.76	-0.84	-5.02	0.00	0.00	0	DN	0
226	4081	SIGIRR	3.24	2.40	-0.84	-14.65	0.00	0.00	0	DN	0
227	7664	SLAIN1	2.61	1.77	-0.84	-4.10	0.01	0.01	0	DN	0
228	25165	AX746989	2.28	1.45	-0.84	-1.86	0.01	0.00	0	DN	0
229	18770	SNORA80	1.19	0.36	-0.84	-1.27	0.00	0.00	0	DN	0
230	21634	AASDH	2.24	1.41	-0.83	-6.58	0.01	0.01	DN	DN	0
231	7941	ECRP	5.26	4.42	-0.83	-8.24	0.01	0.00	0	DN	0
232	30551	TMSB4X	11.95	11.12	-0.83	-9.92	0.00	0.00	0	DN	0
233	2308	RGS18	4.42	3.59	-0.83	-5.43	0.01	0.01	0	DN	0
234	21007	TNFSF10	1.52	0.69	-0.83	-4.31	0.01	0.01	0	DN	DN
235	13589	RAB40B	1.58	0.74	-0.83	-5.22	0.00	0.00	0	DN	0
236	20105	SMARCC1	6.34	5.51	-0.83	-8.32	0.01	0.00	0	DN	0
237	29992	CNTRL	4.22	3.39	-0.83	-3.94	0.01	0.01	0	DN	0
238	15423	CARD8	4.54	3.72	-0.83	-4.59	0.00	0.01	0	DN	0
239	3969	IKZF5	3.33	2.49	-0.83	-7.91	0.00	0.01	0	DN	0
240	17409	SLC39A10	4.41	3.58	-0.83	-5.53	0.01	0.00	0	DN	0
241	3896	ABLIM1	2.47	1.65	-0.82	-3.27	0.00	0.01	DN	DN	0
242	19287	CCDC117	3.96	3.13	-0.82	-6.66	0.00	0.01	DN	DN	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
243	28	AK056486	1.83	1.01	-0.82	-1.31	0.01	0.00	DN	DN	0
244	1312	KCNA3	2.26	1.45	-0.82	-3.77	0.00	0.01	0	DN	0
245	20117	PLXNB1	2.17	1.34	-0.82	-3.38	0.00	0.00	0	DN	0
246	14197	GNG7	3.24	2.43	-0.82	-7.76	0.01	0.01	0	DN	0
247	6866	HAL	1.75	0.93	-0.82	-8.67	0.00	0.01	0	DN	0
248	16939	LOC254128	2.39	1.57	-0.82	-4.23	0.01	0.01	0	DN	0
249	3919	SLC18A2	3.11	2.29	-0.82	-7.67	0.00	0.00	0	DN	0
250	17752	INPP5D	5.48	4.66	-0.82	-13.81	0.01	0.00	0	DN	0
251	8588	FOXN3	3.67	2.85	-0.82	-6.72	0.01	0.01	0	DN	0
252	7514	ZC3H13	5.56	4.75	-0.82	-5.91	0.01	0.01	0	DN	DN
253	14017	BCL2	3.36	2.54	-0.82	-4.93	0.00	0.01	0	DN	0
254	4018	EBF3	2.22	1.40	-0.82	-6.16	0.01	0.01	0	DN	DN
255	6136	ETV6	3.84	3.02	-0.82	-5.88	0.01	0.01	0	DN	0
256	29530	CBWD5	1.48	0.68	-0.81	-1.50	0.01	0.00	0	DN	0
257	30745	CYBB	4.72	3.91	-0.81	-6.49	0.00	0.00	0	DN	DN
258	27672	PRRT4	4.22	3.41	-0.81	-4.06	0.01	0.01	0	DN	0
259	3750	ERLIN1	7.27	6.46	-0.81	-20.90	0.00	0.01	0	DN	0
260	21915	SLC9B2	3.37	2.55	-0.81	-4.52	0.01	0.00	0	DN	0
261	31250	NXT2	4.64	3.83	-0.81	-5.36	0.01	0.00	0	DN	0
262	2743	LYST	5.23	4.41	-0.81	-3.71	0.00	0.01	0	DN	0
263	16622	RMND5A	4.46	3.65	-0.81	-15.32	0.00	0.01	0	DN	0
264	18348	SERINC3	5.37	4.56	-0.81	-17.31	0.00	0.01	0	DN	0
265	12131	AX746771	1.31	0.51	-0.80	-1.42	0.01	0.00	0	DN	0
266	7084	TESC	6.48	5.67	-0.80	-12.61	0.00	0.01	0	DN	DN
267	1274	PSRC1	4.53	3.72	-0.80	-7.87	0.00	0.00	0	DN	0
268	469	STMN1	9.04	8.24	-0.80	-8.06	0.01	0.01	0	DN	0
269	28093	KBTBD11	6.18	5.39	-0.80	-23.26	0.00	0.00	0	DN	0
270	14060	ZADH2	4.08	3.27	-0.80	-15.84	0.01	0.00	0	DN	DN
271	17626	ANKZF1	3.72	2.92	-0.80	-4.04	0.00	0.01	0	DN	0
272	14559	ZSWIM4	1.36	0.56	-0.80	-5.22	0.00	0.01	0	DN	0
273	13691	RAB31	5.58	4.78	-0.80	-8.80	0.01	0.00	0	DN	DN
274	23138	BRD8	3.93	3.13	-0.80	-7.61	0.01	0.01	0	DN	0
275	29561	KLF9	1.90	1.10	-0.80	-4.91	0.01	0.00	0	DN	0
276	9856	DENND4A	3.98	3.19	-0.80	-3.93	0.01	0.01	0	DN	0
277	19143	AX748067	1.53	0.72	-0.80	-2.40	0.01	0.00	0	DN	0
278	19738	CRBN	4.30	3.51	-0.79	-13.52	0.01	0.01	DN	DN	0
279	18894	PDE9A	2.85	2.06	-0.79	-2.57	0.00	0.00	0	DN	DN

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
280	6960	C12orf75	4.80	4.01	-0.79	-7.12	0.00	0.00	0	DN	0
281	25251	SYNJ2	3.49	2.70	-0.79	-5.36	0.01	0.00	0	DN	0
282	12452	IFT20	3.07	2.28	-0.79	-3.46	0.00	0.01	0	DN	0
283	21965	C4orf21	2.43	1.64	-0.79	-3.09	0.00	0.00	0	DN	0
284	10460	DJ031154	3.73	2.93	-0.79	-1.84	0.00	0.01	0	DN	0
285	2347	KIF14	4.44	3.65	-0.79	-8.25	0.01	0.00	0	DN	0
286	6704	IRAK3	3.55	2.77	-0.79	-8.47	0.01	0.00	0	DN	0
287	7659	MYCBP2	5.59	4.81	-0.79	-2.92	0.01	0.01	0	DN	0
288	22981	KCNN2	4.62	3.83	-0.79	-10.64	0.01	0.00	0	DN	0
289	27941	ZNF212	2.68	1.89	-0.79	-6.27	0.00	0.01	0	DN	0
290	13209	BCAS3	1.47	0.69	-0.78	-3.35	0.00	0.00	DN	DN	DN
291	16303	ATP6V1E2	2.32	1.54	-0.78	-4.03	0.01	0.00	0	DN	0
292	15446	CA11	1.89	1.11	-0.78	-4.63	0.00	0.01	0	DN	0
293	18168	C20orf112	3.06	2.28	-0.78	-4.36	0.00	0.00	0	DN	0
294	8235	GNG2	3.20	2.42	-0.78	-6.86	0.00	0.00	0	DN	0
295	28342	ZNF395	4.92	4.13	-0.78	-8.77	0.01	0.00	0	DN	DN
296	17118	KYNU	2.82	2.05	-0.78	-2.77	0.01	0.01	0	DN	0
297	8174	CTAGE5	3.06	2.28	-0.78	-4.11	0.00	0.01	0	DN	0
298	27158	NCF1B	1.13	0.35	-0.78	-1.85	0.01	0.00	0	DN	DN
299	3866	PDCD4-AS1	1.36	0.59	-0.78	-3.32	0.01	0.00	0	DN	0
300	15990	CMPK2	2.32	1.55	-0.77	-3.09	0.00	0.01	0	DN	0
301	19519	SUN2	5.85	5.08	-0.77	-7.95	0.00	0.00	0	DN	0
302	21108	ETV5	4.30	3.53	-0.77	-8.28	0.01	0.01	0	DN	0
303	2726	TARBP1	4.12	3.36	-0.77	-8.10	0.00	0.00	0	DN	0
304	19911	TOP2B	7.75	6.99	-0.77	-6.42	0.01	0.01	0	DN	0
305	19528	CBX7	1.58	0.81	-0.77	-5.01	0.00	0.00	0	DN	0
306	9611	TMOD2	2.18	1.41	-0.77	-5.02	0.00	0.00	0	DN	0
307	2795	HNRNPU-AS1	4.05	3.28	-0.77	-1.07	0.01	0.00	0	DN	0
308	381	PINK1	3.68	2.92	-0.76	-4.69	0.00	0.00	DN	DN	DN
309	2416	ZBED6	2.16	1.40	-0.76	-3.25	0.01	0.00	DN	DN	0
310	17897	SIRPB1	3.75	2.99	-0.76	-4.95	0.01	0.00	0	DN	0
311	23098	PHF15	4.00	3.24	-0.76	-6.00	0.01	0.01	0	DN	0
312	20173	UBA7	2.33	1.57	-0.76	-1.54	0.01	0.01	0	DN	0
313	8290	KIAA0586	3.38	2.62	-0.76	-8.41	0.01	0.00	0	DN	0
314	29052	MAF1	5.55	4.79	-0.76	-6.33	0.00	0.00	0	DN	DN
315	17706	ITM2C	4.77	4.01	-0.76	-6.74	0.00	0.01	0	DN	DN
316	21789	PRDM8	2.36	1.61	-0.76	-5.97	0.01	0.01	0	DN	DN

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
317	16342	SPTBN1	4.36	3.59	-0.76	-6.61	0.01	0.01	0	DN	0
318	23866	BTN3A3	1.32	0.56	-0.76	-4.81	0.01	0.01	0	DN	0
319	1986	PPOX	3.12	2.36	-0.76	-2.77	0.00	0.00	0	DN	0
320	17265	CYBRD1	3.88	3.13	-0.76	-5.75	0.01	0.01	0	DN	0
321	27329	SAMD9	2.37	1.61	-0.76	-8.36	0.00	0.01	0	DN	0
322	17955	RNF24	5.10	4.34	-0.76	-7.38	0.01	0.01	0	DN	0
323	28385	RNF122	1.83	1.08	-0.75	-4.72	0.01	0.01	DN	DN	0
324	12727	FBXL20	1.40	0.65	-0.75	-5.99	0.01	0.01	DN	DN	0
325	1771	CREB3L4	2.71	1.96	-0.75	-2.56	0.01	0.00	DN	DN	0
326	21988	BC035733	2.33	1.58	-0.75	-3.42	0.01	0.00	0	DN	0
327	14355	FCER2	5.18	4.43	-0.75	-3.82	0.01	0.01	0	DN	DN
328	26601	ELFN1	2.40	1.66	-0.75	-11.02	0.01	0.01	0	DN	DN
329	7837	GAS6-AS1	2.53	1.78	-0.75	-1.64	0.00	0.00	0	DN	0
330	5306	FCHSD2	3.70	2.95	-0.75	-7.57	0.01	0.00	0	DN	0
331	21470	GPR125	3.39	2.65	-0.75	-20.15	0.01	0.00	0	DN	0
332	2960	DHTKD1	3.22	2.48	-0.75	-10.21	0.00	0.00	0	DN	0
333	459	TMEM50A	5.65	4.90	-0.75	-7.74	0.00	0.00	0	DN	0
334	2208	RALGPS2	1.90	1.15	-0.75	-7.67	0.00	0.01	0	DN	0
335	30088	SH2D3C	1.46	0.72	-0.75	-3.02	0.01	0.00	0	DN	0
336	2781	LOC731275	2.08	1.33	-0.75	-1.48	0.00	0.00	0	DN	0
337	692	MACF1	4.37	3.62	-0.74	-1.59	0.00	0.01	DN	DN	0
338	15782	KIR3DX1	1.23	0.48	-0.74	-2.58	0.00	0.01	DN	DN	0
339	633	BX537811	3.96	3.22	-0.74	-1.17	0.01	0.01	DN	DN	0
340	9144	WHAMMP2	2.82	2.08	-0.74	-1.69	0.00	0.00	DN	DN	0
341	17284	CIR1	4.64	3.90	-0.74	-8.97	0.00	0.00	DN	DN	DN
342	28063	PTPRN2	4.52	3.78	-0.74	-9.72	0.01	0.01	0	DN	0
343	22252	HMGB2	8.36	7.62	-0.74	-9.27	0.01	0.00	0	DN	0
344	12824	KRT19	2.02	1.28	-0.74	-2.11	0.01	0.00	0	DN	0
345	20828	CHST2	2.91	2.16	-0.74	-8.77	0.01	0.01	0	DN	0
346	24238	PRRT1	1.52	0.78	-0.74	-1.79	0.00	0.00	0	DN	0
347	20725	PIK3R4	3.30	2.56	-0.74	-8.46	0.00	0.01	0	DN	0
348	3101	KIAA1462	0.94	0.19	-0.74	-3.77	0.01	0.00	0	DN	0
349	21871	UNC5C	1.85	1.11	-0.74	-3.54	0.00	0.01	0	DN	0
350	3233	MAPK8	3.88	3.14	-0.74	-4.00	0.01	0.00	0	DN	0
351	31298	DOCK11	4.88	4.14	-0.74	-10.81	0.00	0.01	0	DN	0
352	21530	SMIM14	1.74	1.00	-0.74	-3.58	0.01	0.01	0	DN	0
353	22827	JMY	1.13	0.40	-0.73	-3.68	0.01	0.01	DN	DN	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
354	18461	ATP9A	2.66	1.93	-0.73	-8.82	0.00	0.01	DN	DN	0
355	20803	NMNAT3	3.04	2.31	-0.73	-4.11	0.00	0.01	0	DN	0
356	14548	NFIX	3.90	3.17	-0.73	-4.89	0.00	0.01	0	DN	0
357	21877	TSPAN5	2.38	1.65	-0.73	-6.70	0.00	0.00	0	DN	0
358	14667	AK095221	1.80	1.08	-0.73	-3.48	0.01	0.00	0	DN	0
359	9472	GATM	2.45	1.72	-0.73	-3.30	0.01	0.00	0	DN	0
360	2966	LOC283070	2.51	1.78	-0.73	-3.60	0.01	0.00	0	DN	0
361	22450	ANKRD33B	3.08	2.35	-0.73	-14.11	0.00	0.01	0	DN	0
362	5375	CLNS1A	6.37	5.64	-0.73	-7.75	0.01	0.01	0	DN	0
363	17541	LANCL1	4.48	3.75	-0.73	-10.14	0.00	0.01	0	DN	0
364	24239	PPT2	3.95	3.23	-0.73	-5.97	0.01	0.01	0	DN	0
365	6092	KLRF2	2.25	1.52	-0.73	-2.27	0.01	0.00	0	DN	0
366	14542	SYCE2	2.11	1.38	-0.73	-2.81	0.00	0.01	0	DN	0
367	20789	PIK3CB	4.09	3.36	-0.73	-5.88	0.01	0.01	0	DN	0
368	5622	USP28	3.42	2.69	-0.73	-2.29	0.01	0.00	0	DN	0
369	16105	KIF3C	1.90	1.17	-0.73	-4.15	0.01	0.01	0	DN	0
370	13068	FAM117A	3.23	2.51	-0.73	-5.26	0.00	0.01	0	DN	0
371	20470	CEP97	2.20	1.46	-0.73	-3.33	0.00	0.01	0	DN	0
372	19133	P2RX6P	0.72	0.00	-0.72	-3.81	0.00	0.01	DN	DN	0
373	383	KIF17	2.30	1.57	-0.72	-3.32	0.00	0.01	DN	DN	0
374	31190	BEX1	8.37	7.65	-0.72	-7.93	0.01	0.00	0	DN	DN
375	24473	SRPK1	7.95	7.23	-0.72	-14.10	0.01	0.01	0	DN	0
376	23355	CNOT8	5.35	4.64	-0.72	-4.44	0.01	0.00	0	DN	0
377	326	BC070363	1.52	0.81	-0.72	-1.86	0.00	0.01	0	DN	0
378	11476	DOK4	1.82	1.10	-0.72	-2.54	0.01	0.01	0	DN	0
379	13270	POLG2	3.52	2.79	-0.72	-3.12	0.01	0.01	0	DN	0
380	19307	NIPSNAP1	4.68	3.96	-0.72	-5.28	0.01	0.00	0	DN	0
381	2124	SELL	1.24	0.52	-0.72	-3.00	0.01	0.00	0	DN	0
382	4014	PTPRE	3.19	2.46	-0.72	-2.72	0.01	0.01	0	DN	DN
383	1347	PPM1J	0.98	0.26	-0.72	-2.79	0.00	0.00	0	DN	0
384	11068	LOC100190986	2.74	2.02	-0.72	-0.80	0.01	0.01	0	DN	0
385	16628	LOC285074	2.66	1.95	-0.71	-1.55	0.01	0.01	DN	DN	0
386	27848	TCRBV1S1A1N1	2.24	1.53	-0.71	-0.90	0.00	0.01	0	DN	0
387	17994	LAMP5	7.64	6.93	-0.71	-8.61	0.00	0.01	0	DN	0
388	13230	MRC2	5.49	4.79	-0.71	-9.75	0.01	0.00	0	DN	0
389	11874	DQ574721	4.59	3.87	-0.71	-1.33	0.01	0.00	0	DN	0
390	5747	KIAA1201	3.09	2.39	-0.71	-2.09	0.01	0.00	0	DN	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
391	4568	TSPAN18	3.67	2.96	-0.71	-4.55	0.00	0.00	0	DN	0
392	2710	DISC1	2.47	1.76	-0.71	-6.40	0.01	0.00	0	DN	0
393	9816	RPS27L	5.75	5.04	-0.71	-5.35	0.00	0.00	0	DN	0
394	5478	MRE11A	3.45	2.74	-0.71	-34.99	0.00	0.01	0	DN	0
395	4729	ATG13	3.59	2.88	-0.71	-4.07	0.01	0.00	0	DN	0
396	22780	ANKRA2	2.01	1.30	-0.71	-5.10	0.00	0.00	0	DN	0
397	9173	GOLGA8T	3.88	3.18	-0.71	-1.77	0.01	0.01	0	DN	0
398	17240	DHRS9	2.64	1.94	-0.70	-4.19	0.00	0.01	DN	DN	0
399	9623	FAM214A	1.84	1.14	-0.70	-2.53	0.01	0.00	DN	DN	0
400	6324	SLC38A2	5.14	4.44	-0.70	-12.54	0.01	0.01	DN	DN	0
401	6091	CLEC2B	8.40	7.70	-0.70	-9.93	0.00	0.00	0	DN	0
402	14859	AK075337	0.70	0.00	-0.70	-3.55	0.00	0.00	0	DN	0
403	22706	CENPH	5.46	4.77	-0.70	-5.12	0.00	0.00	0	DN	0
404	10205	ZSCAN2	2.51	1.81	-0.70	-2.40	0.00	0.01	0	DN	0
405	3365	EIF4EBP2	5.06	4.35	-0.70	-10.60	0.00	0.00	0	DN	0
406	6896	APAF1	3.37	2.68	-0.70	-8.33	0.01	0.01	0	DN	0
407	22903	GLRX	4.81	4.11	-0.70	-5.73	0.00	0.01	0	DN	0
408	3059	ARHGAP21	2.47	1.77	-0.70	-5.51	0.01	0.00	0	DN	0
409	13160	SUPT4H1	4.95	4.26	-0.70	-6.96	0.01	0.01	0	DN	0
410	28322	DPYSL2	4.64	3.94	-0.70	-7.87	0.00	0.01	0	DN	0
411	3148	ZNF37BP	2.30	1.61	-0.70	-2.03	0.00	0.01	0	DN	0
412	18317	CHD6	2.65	1.94	-0.70	-3.99	0.00	0.01	0	DN	0
413	17200	BC073897	2.22	1.54	-0.69	-1.44	0.00	0.00	0	DN	0
414	28985	PTP4A3	3.41	2.72	-0.69	-5.07	0.01	0.00	0	DN	0
415	19990	CX3CR1	1.04	0.35	-0.69	-2.47	0.01	0.00	0	DN	0
416	17350	CERKL	3.73	3.04	-0.69	-6.94	0.00	0.00	0	DN	0
417	14113	PALM	2.07	1.38	-0.69	-7.06	0.00	0.01	0	DN	DN
418	11864	DBNDD1	1.25	0.56	-0.69	-2.34	0.00	0.01	0	DN	0
419	2932	PRKCQ-AS1	2.56	1.88	-0.69	-4.22	0.00	0.00	0	DN	0
420	28764	FBXO43	2.79	2.09	-0.69	-3.18	0.01	0.00	0	DN	0
421	12495	MYO18A	3.83	3.14	-0.69	-5.61	0.01	0.01	0	DN	0
422	29179	PSIP1	5.78	5.09	-0.69	-7.84	0.01	0.00	0	DN	DN
423	6253	CCDC91	3.41	2.72	-0.69	-3.01	0.00	0.00	0	DN	0
424	11416	RBL2	4.27	3.58	-0.69	-5.13	0.00	0.01	0	DN	0
425	21613	CHIC2	3.27	2.57	-0.69	-7.19	0.00	0.00	0	DN	DN
426	5887	CCDC77	3.16	2.47	-0.69	-4.23	0.01	0.01	0	DN	0
427	23127	SPOCK1	1.84	1.15	-0.69	-5.79	0.01	0.00	0	DN	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
428	20942	SMC4	7.03	6.34	-0.69	-16.52	0.01	0.01	0	DN	DN
429	9311	GOLGA8B	3.76	3.07	-0.69	-1.37	0.00	0.00	0	DN	0
430	5886	KDM5A	3.27	2.58	-0.69	-3.30	0.00	0.01	0	DN	0
431	9332	BC037952	3.70	3.03	-0.68	-1.15	0.00	0.00	DN	DN	0
432	28958	NDRG1	5.97	5.29	-0.68	-9.13	0.01	0.01	0	DN	DN
433	14077	CTDP1	4.17	3.48	-0.68	-5.29	0.01	0.00	0	DN	0
434	14452	SLC44A2	3.30	2.62	-0.68	-7.48	0.00	0.00	0	DN	DN
435	29823	CORO2A	2.49	1.81	-0.68	-2.77	0.01	0.01	0	DN	0
436	30529	SHROOM2	1.51	0.84	-0.68	-5.71	0.01	0.00	0	DN	0
437	7075	MED13L	3.70	3.02	-0.68	-5.41	0.01	0.01	0	DN	0
438	21071	ABCC5	2.79	2.11	-0.68	-5.14	0.00	0.01	0	DN	0
439	27316	AKAP9	2.86	2.18	-0.68	-2.37	0.00	0.01	0	DN	0
440	24019	ZKSCAN8	3.32	2.64	-0.68	-4.22	0.00	0.00	0	DN	0
441	25148	AK097143	2.36	1.68	-0.68	-0.84	0.01	0.01	0	DN	0
442	20601	GOLGB1	2.90	2.23	-0.67	-3.27	0.00	0.01	DN	DN	0
443	76	C1orf233	2.93	2.26	-0.67	-4.88	0.01	0.01	0	DN	0
444	26817	ZNRF2	3.62	2.95	-0.67	-3.87	0.00	0.01	0	DN	0
445	11427	LPCAT2	4.62	3.95	-0.67	-7.04	0.00	0.01	0	DN	0
446	20714	PLXND1	4.94	4.27	-0.67	-3.65	0.00	0.01	0	DN	0
447	11903	SLC43A2	1.80	1.13	-0.67	-3.76	0.00	0.00	0	DN	0
448	912	TMEM59	6.11	5.45	-0.67	-4.99	0.01	0.01	0	DN	0
449	10203	UBE2Q2P1	1.66	0.99	-0.67	-1.73	0.01	0.01	0	DN	0
450	18591	HELZ2	1.36	0.69	-0.67	-6.52	0.01	0.01	0	DN	0
451	7409	N4BP2L1	1.82	1.15	-0.67	-2.94	0.00	0.00	0	DN	0
452	1474	PFN1P2	1.68	1.02	-0.66	-0.89	0.00	0.01	DN	DN	0
453	10192	DQ586822	1.33	0.68	-0.66	-1.46	0.00	0.01	DN	DN	0
454	6726	LYZ	9.60	8.95	-0.66	-7.39	0.00	0.01	0	DN	DN
455	20603	EAF2	5.31	4.65	-0.66	-4.96	0.01	0.00	0	DN	0
456	2464	SLC26A9	5.03	4.36	-0.66	-22.95	0.00	0.00	0	DN	DN
457	10109	IL16	3.80	3.14	-0.66	-4.76	0.00	0.01	0	DN	0
458	12867	FAM134C	2.67	2.01	-0.66	-5.37	0.00	0.00	0	DN	0
459	10034	NRG4	2.47	1.81	-0.66	-4.61	0.00	0.01	0	DN	0
460	20704	H1FX	6.51	5.84	-0.66	-11.18	0.01	0.01	0	DN	0
461	23139	KIF20A	4.89	4.23	-0.66	-13.72	0.01	0.01	0	DN	0
462	11880	FAM101B	5.85	5.18	-0.66	-9.81	0.00	0.00	0	DN	DN
463	1273	CELSR2	1.46	0.81	-0.66	-5.60	0.01	0.01	0	DN	0
464	26791	HIBADH	5.06	4.40	-0.66	-5.03	0.01	0.01	0	DN	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
465	645	AK025726	2.01	1.36	-0.66	-2.07	0.01	0.01	0	DN	0
466	12873	EZH1	2.52	1.87	-0.66	-1.78	0.01	0.01	0	DN	0
467	22555	RICTOR	2.38	1.72	-0.66	-4.30	0.00	0.00	0	DN	0
468	6303	YAF2	2.71	2.05	-0.66	-4.07	0.00	0.01	0	DN	0
469	8287	ARID4A	2.64	1.99	-0.66	-5.33	0.01	0.01	0	DN	0
470	13130	NOG	1.49	0.83	-0.66	-1.79	0.00	0.00	0	DN	0
471	17448	CLK1	4.15	3.50	-0.66	-2.26	0.00	0.01	0	DN	0
472	4471	endogenous retrovirus ERV9	1.78	1.14	-0.65	-1.02	0.00	0.00	DN	DN	0
473	3348	SRGN	10.60	9.95	-0.65	-7.14	0.00	0.00	0	DN	0
474	18522	PHACTR3	4.82	4.18	-0.65	-7.94	0.01	0.00	0	DN	0
475	20227	ACY1	4.53	3.88	-0.65	-3.68	0.01	0.00	0	DN	0
476	10056	TBC1D2B	4.74	4.09	-0.65	-15.13	0.00	0.00	0	DN	0
477	4451	E2F8	4.44	3.79	-0.65	-9.86	0.01	0.01	0	DN	DN
478	18205	PIGU	5.37	4.73	-0.65	-5.25	0.01	0.00	0	DN	0
479	20492	IFT57	5.16	4.52	-0.65	-16.93	0.00	0.01	0	DN	DN
480	31028	IL2RG	6.93	6.28	-0.65	-7.44	0.00	0.01	0	DN	DN
481	11523	NAE1	6.25	5.60	-0.65	-5.05	0.01	0.00	0	DN	0
482	13104	AK090674	2.17	1.52	-0.65	-3.88	0.01	0.00	0	DN	0
483	6403	ASIC1	3.59	2.94	-0.65	-5.04	0.00	0.01	0	DN	0
484	16277	ZFP36L2	7.41	6.76	-0.65	-8.03	0.01	0.00	0	DN	0
485	12761	TOP2A	6.87	6.22	-0.65	-6.50	0.01	0.00	0	DN	0
486	6534	PDE1B	2.16	1.51	-0.65	-1.71	0.01	0.01	0	DN	0
487	4886	DTX4	1.18	0.52	-0.65	-6.91	0.00	0.00	0	DN	0
488	7128	UNC119B	4.07	3.41	-0.65	-3.57	0.00	0.00	0	DN	0
489	14436	ICAM4	3.09	2.45	-0.65	-4.11	0.00	0.01	0	DN	0
490	5192	AK057681	1.80	1.14	-0.65	-1.08	0.00	0.01	0	DN	0
491	21843	PPM1K	2.11	1.46	-0.65	-3.20	0.00	0.00	0	DN	0
492	28971	FAM135B	0.82	0.17	-0.65	-11.18	0.00	0.01	0	DN	0
493	2335	NEK7	4.50	3.85	-0.65	-2.62	0.00	0.01	0	DN	0
494	30862	PRAF2	4.23	3.57	-0.65	-7.79	0.00	0.00	0	DN	0
495	12047	XAF1	1.72	1.07	-0.65	-1.44	0.01	0.00	0	DN	0
496	12311	CCDC144B	1.84	1.19	-0.65	-1.41	0.00	0.01	0	DN	0
497	13294	HELZ	2.92	2.27	-0.65	-3.04	0.00	0.00	0	DN	0
498	12356	LGALS9B	0.82	0.17	-0.64	-3.78	0.01	0.00	DN	DN	0
499	7018	GPN3	4.65	4.01	-0.64	-4.25	0.00	0.00	0	DN	0
500	19197	RGL4	1.68	1.04	-0.64	-3.66	0.00	0.01	0	DN	0
501	6239	TM7SF3	4.89	4.26	-0.64	-5.08	0.00	0.01	0	DN	0

#	GeneID	Gene Symbol		U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
502	27881	CASP2		4.78	4.14	-0.64	-4.39	0.01	0.01	0	DN	0
503	20604	SLC15A2		1.43	0.79	-0.64	-1.66	0.00	0.00	0	DN	0
504	22077	MAML3		1.67	1.03	-0.64	-5.27	0.00	0.01	0	DN	0
505	26763	NFE2L3		3.47	2.84	-0.64	-6.19	0.01	0.00	0	DN	0
506	16433	MEIS1		4.91	4.28	-0.64	-6.04	0.01	0.00	0	DN	0
507	18790	GART		6.50	5.86	-0.64	-10.40	0.01	0.01	0	DN	0
508	17349	ITGA4		7.04	6.40	-0.64	-14.93	0.00	0.00	0	DN	0
509	3185		42071	2.28	1.64	-0.64	-4.14	0.00	0.01	0	DN	0
510	11582	DPEP2		1.58	0.94	-0.64	-4.96	0.01	0.01	0	DN	0
511	12743	ORMDL3		3.64	3.01	-0.64	-3.72	0.01	0.01	0	DN	0
512	12972	LRRC37A4P		3.20	2.57	-0.64	-3.31	0.00	0.00	0	DN	0
513	8176	FBXO33		2.46	1.82	-0.64	-7.60	0.00	0.01	0	DN	0
514	25012	BC022047		1.41	0.77	-0.64	-5.05	0.00	0.01	0	DN	0
515	2238	CEP350		3.69	3.05	-0.64	-3.11	0.00	0.01	0	DN	0
516	30401	tRNA Pro		9.40	8.76	-0.64	-3.56	0.00	0.00	0	DN	0
517	22878	CETN3		4.26	3.62	-0.64	-4.17	0.00	0.01	0	DN	0
518	23518	MXD3		3.25	2.62	-0.63	-4.22	0.00	0.01	0	DN	0
519	186	PIK3CD		5.42	4.79	-0.63	-8.65	0.01	0.00	0	DN	0
520	23543	GMCL1P1		2.08	1.45	-0.63	-1.83	0.01	0.01	0	DN	0
521	30173	USP20		4.17	3.54	-0.63	-8.19	0.00	0.00	0	DN	0
522	8484	VASH1		3.00	2.37	-0.63	-10.66	0.01	0.01	0	DN	0
523	15784	LILRB1		2.27	1.64	-0.63	-2.18	0.00	0.00	0	DN	0
524	27187	CLIP2		2.63	2.01	-0.63	-3.47	0.01	0.01	0	DN	DN
525	24559	TAF8		4.49	3.86	-0.63	-5.61	0.01	0.00	0	DN	0
526	30334	C9orf139		1.39	0.76	-0.63	-1.96	0.00	0.00	0	DN	0
527	4073	ATHL1		3.53	2.90	-0.63	-2.48	0.00	0.00	0	DN	0
528	612	ZNF362		2.82	2.19	-0.63	-3.52	0.01	0.01	0	DN	DN
529	5844	ZBTB44		3.80	3.16	-0.63	-10.68	0.00	0.00	0	DN	0
530	17934	SLC4A11		2.65	2.03	-0.63	-5.51	0.00	0.01	0	DN	DN
531	17530	PIKFYVE		3.66	3.03	-0.63	-5.45	0.01	0.01	0	DN	0
532	22556	FYB		3.83	3.19	-0.63	-5.13	0.01	0.00	0	DN	0
533	24261	LOC100507463		3.79	3.17	-0.63	-3.86	0.01	0.00	0	DN	0
534	10263	AP3S2		2.88	2.25	-0.63	-5.70	0.00	0.01	0	DN	0
535	20287	FAM208A		4.79	4.16	-0.63	-7.41	0.01	0.00	0	DN	0
536	12899	NBR1		3.22	2.60	-0.63	-10.62	0.00	0.00	0	DN	0
537	23469	CREBRF		1.04	0.40	-0.63	-5.87	0.01	0.00	0	DN	0
538	26587	GPR146		1.42	0.81	-0.62	-3.06	0.00	0.01	DN	DN	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
539	14121	ELANE	9.87	9.25	-0.62	-14.64	0.00	0.01	0	DN	0
540	7245	MMP17	2.11	1.49	-0.62	-3.54	0.01	0.00	0	DN	0
541	15445	DBP	3.71	3.09	-0.62	-5.09	0.00	0.01	0	DN	0
542	9406	CAPN3	1.28	0.66	-0.62	-1.24	0.01	0.01	0	DN	0
543	785	ERI3	5.70	5.08	-0.62	-4.30	0.00	0.01	0	DN	0
544	1501	GNRHR2	2.17	1.54	-0.62	-1.64	0.01	0.00	0	DN	0
545	16766	IL18R1	2.39	1.77	-0.62	-5.70	0.00	0.01	0	DN	0
546	27261	RSBN1L	3.76	3.14	-0.62	-5.44	0.01	0.01	0	DN	0
547	29506	BC080605	2.33	1.71	-0.62	-1.72	0.01	0.00	0	DN	0
548	24581	KLHDC3	6.90	6.28	-0.62	-13.03	0.01	0.00	0	DN	0
549	527	EYA3	3.96	3.34	-0.62	-4.88	0.00	0.00	0	DN	0
550	2162	TNFSF4	1.02	0.40	-0.62	-3.68	0.00	0.00	0	DN	0
551	12427	KSR1	1.98	1.36	-0.62	-2.62	0.00	0.00	0	DN	0
552	22259	CEP44	2.72	2.10	-0.62	-11.62	0.01	0.00	0	DN	0
553	12272	GID4	2.59	1.97	-0.62	-8.65	0.00	0.01	0	DN	0
554	17471	SUMO1	6.07	5.45	-0.62	-5.21	0.01	0.01	0	DN	0
555	9913	UACA	2.95	2.32	-0.62	-4.77	0.00	0.01	0	DN	DN
556	29533	CBWD3	4.01	3.39	-0.62	-1.50	0.00	0.00	0	DN	0
557	29667	ISCA1	3.80	3.18	-0.62	-1.90	0.01	0.00	0	DN	0
558	9362	CASC5	4.13	3.51	-0.62	-2.42	0.01	0.01	0	DN	0
559	29869	LOC286367	1.23	0.61	-0.62	-2.09	0.01	0.01	0	DN	0
560	16691	ANKRD36C	1.80	1.18	-0.62	-1.14	0.00	0.00	0	DN	0
561	24689	ICK	2.35	1.73	-0.62	-4.89	0.01	0.00	0	DN	0
562	455	SYF2	5.11	4.49	-0.62	-5.05	0.00	0.00	0	DN	0
563	19069	SEPT5-GP1BB	0.93	0.31	-0.62	-3.39	0.01	0.01	0	DN	0
564	21804	AK128593	2.31	1.69	-0.62	-1.34	0.01	0.00	0	DN	0
565	7729	MBNL2	2.94	2.32	-0.62	-5.73	0.01	0.01	0	DN	0
566	10729	CCDC154	2.18	1.57	-0.61	-2.05	0.01	0.00	DN	DN	0
567	20456	TMEM45A	3.46	2.84	-0.61	-1.13	0.01	0.01	DN	DN	0
568	21808	PLAC8	3.24	2.63	-0.61	-5.92	0.01	0.01	0	DN	0
569	23067	IRF1	2.74	2.12	-0.61	-1.75	0.01	0.00	0	DN	DN
570	16883	IL1RN	2.74	2.13	-0.61	-2.73	0.00	0.01	0	DN	DN
571	19192	IGLL1	1.18	0.57	-0.61	-1.52	0.00	0.00	0	DN	0
572	19059	CLTCL1	3.98	3.37	-0.61	-2.88	0.01	0.01	0	DN	0
573	4160	ASCL2	1.13	0.52	-0.61	-6.95	0.00	0.00	0	DN	0
574	2200	SEC16B	1.52	0.92	-0.61	-2.98	0.00	0.00	0	DN	0
575	9405	GANC	3.97	3.36	-0.61	-9.00	0.00	0.01	0	DN	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
576	29950	ALAD	3.40	2.79	-0.61	-4.24	0.01	0.01	0	DN	0
577	1672	RFX5	4.44	3.83	-0.61	-11.15	0.01	0.00	0	DN	0
578	8988	GOLGA8I	2.41	1.81	-0.61	-1.08	0.01	0.01	0	DN	0
579	8705	BC014138	4.51	3.90	-0.61	-6.91	0.00	0.01	0	DN	0
580	20034	SNRK	4.38	3.76	-0.61	-9.11	0.00	0.01	0	DN	0
581	7566	FAM124A	2.38	1.77	-0.61	-5.91	0.00	0.01	0	DN	0
582	18866	MX2	5.89	5.28	-0.61	-5.57	0.01	0.01	0	DN	0
583	881	ZFYVE9	2.20	1.59	-0.61	-3.96	0.01	0.01	0	DN	0
584	17493	BC047484	2.47	1.86	-0.61	-3.00	0.01	0.01	0	DN	0
585	20262	ITIH4	1.32	0.71	-0.61	-2.04	0.01	0.01	0	DN	0
586	24852	CASP8AP2	3.29	2.68	-0.61	-3.01	0.01	0.01	0	DN	0
587	29259	IFT74	3.28	2.67	-0.61	-2.34	0.00	0.00	0	DN	0
588	14018	KDSR	4.04	3.43	-0.61	-6.37	0.00	0.00	0	DN	0
589	17664	WDFY1	5.52	4.91	-0.61	-7.33	0.01	0.00	0	DN	0
590	11900	INPP5K	2.54	1.92	-0.61	-3.41	0.01	0.00	0	DN	0
591	19764	SRGAP3	0.98	0.38	-0.61	-4.00	0.00	0.01	0	DN	0
592	21003	TMEM212	2.64	2.03	-0.61	-1.18	0.01	0.01	0	DN	0
593	12108	TP53	2.50	1.89	-0.61	-0.99	0.00	0.01	0	DN	0
594	25171	UTRN	2.91	2.31	-0.61	-2.17	0.00	0.00	0	DN	0
595	20402	BC050344	2.85	2.24	-0.61	-0.94	0.00	0.01	0	DN	0
596	6751	TBC1D15	4.39	3.79	-0.60	-5.20	0.01	0.01	DN	DN	0
597	25138	HECA	3.40	2.80	-0.60	-6.38	0.00	0.01	DN	DN	0
598	5562	ATM	3.22	2.62	-0.60	-2.42	0.01	0.00	DN	DN	0
599	5025	LGALS12	5.44	4.84	-0.60	-8.74	0.00	0.01	0	DN	0
600	2817	NLRP3	3.43	2.84	-0.60	-6.97	0.01	0.00	0	DN	0
601	27998	ABP1	2.96	2.37	-0.60	-3.25	0.00	0.01	0	DN	0
602	20190	HYAL3	4.30	3.70	-0.60	-3.96	0.01	0.01	0	DN	0
603	5237	CPT1A	4.59	3.99	-0.60	-5.88	0.00	0.00	0	DN	0
604	18405	SLC35C2	4.85	4.25	-0.60	-5.46	0.00	0.01	0	DN	0
605	24504	CCDC167	5.04	4.44	-0.60	-4.78	0.00	0.00	0	DN	0
606	13389	MIF4GD	3.18	2.58	-0.60	-2.95	0.01	0.00	0	DN	0
607	17985	FERMT1	4.17	3.56	-0.60	-5.73	0.00	0.00	0	DN	0
608	13970	TCF4	2.41	1.82	-0.60	-1.92	0.01	0.00	0	DN	0
609	28314	DKFZp451J181	2.67	2.07	-0.60	-3.26	0.00	0.01	0	DN	0
610	4519	LMO2	5.61	5.01	-0.60	-8.22	0.00	0.00	0	DN	0
611	21439	AX746699	1.18	0.58	-0.60	-1.70	0.01	0.00	0	DN	0
612	10937	ATF7IP2	1.55	0.94	-0.60	-2.03	0.01	0.00	0	DN	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
613	11916	DPH1	4.00	3.40	-0.60	-2.26	0.00	0.01	0	DN	0
614	6269	FAM60A	5.10	4.50	-0.60	-6.49	0.01	0.01	0	DN	0
615	8406	PCNX	3.69	3.09	-0.60	-5.64	0.00	0.00	0	DN	0
616	18979	BC031638	2.57	1.97	-0.60	-2.16	0.01	0.01	0	DN	0
617	7052	OAS2	1.14	0.55	-0.60	-4.78	0.00	0.01	0	DN	0
618	19799	GHRL	0.88	0.29	-0.60	-1.80	0.00	0.00	0	DN	0
619	5975	VAMP1	2.34	1.74	-0.60	-1.56	0.01	0.00	0	DN	0
620	29855	GRIN3A	1.29	0.69	-0.60	-2.24	0.00	0.00	0	DN	0
621	6869	ELK3	4.25	3.65	-0.60	-3.54	0.01	0.00	0	DN	0
622	7698	MIR17HG	3.05	2.44	-0.60	-1.38	0.01	0.01	0	DN	0
623	20286	CCDC66	3.82	3.22	-0.60	-9.49	0.01	0.01	0	DN	0
624	1646	PRUNE	3.37	2.77	-0.60	-4.25	0.01	0.00	0	DN	0
625	2095	POU2F1	2.71	2.11	-0.60	-2.67	0.01	0.00	0	DN	0
626	13771	RNMT	4.29	3.69	-0.60	-2.75	0.00	0.00	0	DN	0
627	21580	FRYL	2.99	2.39	-0.60	-3.54	0.00	0.00	0	DN	0
628	20617	PARP14	2.34	1.74	-0.60	-6.10	0.01	0.00	0	DN	0
629	9640	RFX7	3.93	3.34	-0.60	-4.41	0.00	0.01	0	DN	0
630	9647	CGNL1	1.57	0.97	-0.60	-5.18	0.01	0.01	0	DN	0
631	21213	UBXN7	2.46	1.85	-0.60	-9.83	0.01	0.00	0	DN	0
632	310	CROCCP2	4.69	4.10	-0.60	-1.51	0.00	0.01	0	DN	0
633	594	BSDC1	3.80	3.20	-0.60	-4.16	0.00	0.01	0	DN	0
634	6352	SNORA34	0.75	0.17	-0.59	-1.19	0.01	0.00	DN	DN	0
635	13877	KIAA1328	3.25	2.67	-0.59	-1.41	0.00	0.00	DN	DN	0
636	11972	SPNS2	1.44	0.86	-0.59	-2.40	0.01	0.00	0	DN	0
637	19167	PPM1F	3.84	3.25	-0.59	-3.84	0.01	0.00	0	DN	0
638	608	AK2	8.17	7.58	-0.59	-8.54	0.00	0.01	0	DN	0
639	19294	EMID1	1.45	0.85	-0.59	-1.66	0.00	0.00	0	DN	0
640	20891	MBNL1	6.90	6.31	-0.59	-25.56	0.01	0.01	0	DN	0
641	26878	AOAH	2.83	2.25	-0.59	-3.27	0.00	0.01	0	DN	0
642	10835	MMP25	2.98	2.39	-0.59	-3.27	0.00	0.01	0	DN	DN
643	23367	CYFIP2	2.53	1.94	-0.59	-7.65	0.00	0.01	0	DN	0
644	13688	RALBP1	4.97	4.38	-0.59	-10.60	0.01	0.00	0	DN	0
645	30032	MIR600HG	1.27	0.68	-0.59	-2.41	0.00	0.00	0	DN	0
646	1406	FAM46C	3.34	2.75	-0.59	-4.44	0.00	0.00	0	DN	DN
647	1366	HIPK1	4.51	3.91	-0.59	-5.89	0.01	0.00	0	DN	0
648	6306	AK096233	1.50	0.91	-0.59	-1.98	0.00	0.00	0	DN	0
649	29395	ZCCHC7	3.88	3.29	-0.59	-17.69	0.01	0.00	0	DN	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
650	9112	HERC2	4.05	3.46	-0.59	-1.34	0.00	0.00	0	DN	0
651	15438	CYTH2	3.16	2.58	-0.59	-2.46	0.01	0.00	0	DN	0
652	3139	ZNF37A	3.42	2.83	-0.59	-2.76	0.00	0.01	0	DN	0
653	21513	FLJ13197	1.78	1.19	-0.59	-1.11	0.01	0.00	0	DN	0
654	2934	SFMBT2	3.43	2.84	-0.59	-3.27	0.01	0.00	0	DN	DN
655	29594	VPS13A	2.90	2.31	-0.59	-2.21	0.00	0.01	0	DN	0
656	24247	AK123889	2.47	1.89	-0.59	-1.89	0.00	0.00	0	DN	0
657	21432	MGC4836	3.63	3.05	-0.58	-1.05	0.01	0.00	DN	DN	0
658	31231	MORC4	4.69	4.11	-0.58	-1.28	0.00	0.00	DN	DN	0
659	4916	MS4A3	5.17	4.59	-0.58	-4.70	0.00	0.00	0	DN	UP
660	30131	CERCAM	4.39	3.81	-0.58	-6.15	0.00	0.00	0	DN	0
661	4162	TSPAN32	3.09	2.51	-0.58	-2.03	0.01	0.01	0	DN	0
662	18616	TCEA2	3.48	2.90	-0.58	-1.35	0.01	0.00	0	DN	0
663	26987	IKZF1	5.44	4.86	-0.58	-13.33	0.00	0.00	0	DN	0
664	30750	RPGR	3.61	3.03	-0.58	-5.15	0.01	0.00	0	DN	0
665	8695	CCDC85C	2.45	1.86	-0.58	-10.31	0.00	0.00	0	DN	0
666	10908	ROGDI	4.01	3.44	-0.58	-3.64	0.00	0.01	0	DN	DN
667	31526	AFF2	4.28	3.70	-0.58	-2.34	0.01	0.00	0	DN	0
668	19187	BCR	4.07	3.48	-0.58	-2.46	0.00	0.01	0	DN	0
669	29209	PTPLAD2	3.22	2.64	-0.58	-1.98	0.00	0.01	0	DN	0
670	6705	HELB	1.26	0.68	-0.58	-2.49	0.00	0.00	0	DN	0
671	17917	EBF4	1.68	1.10	-0.58	-2.66	0.01	0.01	0	DN	0
672	23281	ADRB2	3.18	2.60	-0.58	-1.97	0.01	0.01	0	DN	0
673	24462	FANCE	5.58	5.00	-0.58	-8.92	0.01	0.01	0	DN	0
674	24475	MAPK14	6.51	5.94	-0.58	-6.41	0.00	0.00	0	DN	0
675	16876	IL1B	1.36	0.78	-0.58	-6.22	0.00	0.01	0	DN	0
676	5518	TMEM123	6.54	5.96	-0.58	-3.71	0.00	0.00	0	DN	0
677	9200	LOC643699	4.22	3.64	-0.58	-1.49	0.01	0.01	0	DN	0
678	16718	ANKRD36	3.26	2.68	-0.58	-1.07	0.01	0.00	0	DN	0
679	6240	MED21	3.83	3.25	-0.58	-6.78	0.00	0.00	0	DN	0
680	10294	SV2B	1.16	0.58	-0.58	-2.98	0.01	0.00	0	DN	0
681	6533	NCKAP1L	6.13	5.55	-0.58	-15.94	0.01	0.01	0	DN	0
682	31082	AX748371	1.14	0.56	-0.58	-1.48	0.00	0.01	0	DN	0
683	24553	DQ592954	3.10	2.51	-0.58	-4.06	0.01	0.01	0	DN	0
684	27340	BET1	3.43	2.84	-0.58	-2.72	0.00	0.00	0	DN	0
685	503	TRNP1	0.85	0.27	-0.58	-5.26	0.01	0.00	0	DN	0
686	24570	GLTSCR1L	2.97	2.38	-0.58	-4.37	0.01	0.00	0	DN	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
687	11200	SNX29P2	3.19	2.62	-0.57	-0.83	0.00	0.00	DN	DN	0
688	20021	NKTR	4.11	3.54	-0.57	-1.16	0.01	0.01	DN	DN	0
689	20818	XRN1	2.57	1.99	-0.57	-2.68	0.00	0.01	DN	DN	0
690	29008	LY6E	6.72	6.14	-0.57	-8.27	0.00	0.00	0	DN	0
691	1752	S100A4	9.01	8.44	-0.57	-5.70	0.01	0.01	0	DN	0
692	12171	MYH10	1.11	0.54	-0.57	-2.80	0.00	0.01	0	DN	0
693	3550	TSPAN14	4.81	4.24	-0.57	-8.36	0.01	0.00	0	DN	0
694	7246	ULK1	3.35	2.78	-0.57	-3.50	0.00	0.01	0	DN	0
695	5827	FLI1	5.56	5.00	-0.57	-9.73	0.00	0.00	0	DN	0
696	18459	NFATC2	2.72	2.15	-0.57	-6.64	0.00	0.01	0	DN	0
697	7404	EEF1DP3	1.00	0.43	-0.57	-1.37	0.00	0.00	0	DN	0
698	62	MXRA8	1.43	0.86	-0.57	-1.66	0.00	0.00	0	DN	0
699	9810	TLN2	2.91	2.35	-0.57	-7.46	0.01	0.01	0	DN	0
700	31191	NXF3	6.13	5.56	-0.57	-4.57	0.01	0.01	0	DN	0
701	1061	USP33	4.85	4.28	-0.57	-4.03	0.01	0.00	0	DN	0
702	8207	KLHDC2	3.71	3.14	-0.57	-4.10	0.01	0.01	0	DN	0
703	12403	C17orf103	0.90	0.32	-0.57	-3.31	0.01	0.01	0	DN	0
704	22974	DCP2	3.51	2.93	-0.57	-4.85	0.00	0.01	0	DN	0
705	23759	FAM8A1	2.34	1.77	-0.57	-3.91	0.01	0.00	0	DN	0
706	29108	CBWD1	5.45	4.89	-0.57	-4.64	0.00	0.01	0	DN	DN
707	3443	KAT6B	2.30	1.73	-0.57	-5.36	0.01	0.00	0	DN	0
708	17274	PDK1	7.64	7.07	-0.57	-8.04	0.00	0.00	0	DN	0
709	4763	PTPRJ	2.55	1.99	-0.57	-3.66	0.01	0.00	0	DN	0
710	2830	TRIM58	2.15	1.58	-0.57	-2.70	0.01	0.01	0	DN	0
711	2109	ANKRD36BP1	3.28	2.71	-0.57	-2.10	0.00	0.01	0	DN	0
712	21427	BOD1L1	3.03	2.46	-0.57	-2.57	0.00	0.01	0	DN	0
713	8679	ATG2B	1.99	1.41	-0.57	-4.27	0.00	0.00	0	DN	0
714	1196	PTBP2	3.27	2.70	-0.57	-1.52	0.00	0.00	0	DN	0
715	24851	MDN1	2.90	2.33	-0.57	-1.27	0.01	0.01	0	DN	0
716	5920	TSPAN9	1.13	0.56	-0.57	-2.42	0.00	0.00	0	DN	0
717	24026	ZSCAN26	2.13	1.56	-0.57	-2.80	0.00	0.01	0	DN	0
718	28663	AB209185	1.21	0.64	-0.57	-1.01	0.01	0.00	0	DN	0
719	9632	CCPG1	6.50	5.94	-0.56	-4.94	0.01	0.00	DN	DN	0
720	8161	MIPOL1	2.08	1.52	-0.56	-0.93	0.00	0.01	DN	DN	0
721	10080	ADAMTS7	2.12	1.56	-0.56	-2.86	0.01	0.01	0	DN	0
722	27868	EPHB6	2.30	1.74	-0.56	-2.69	0.01	0.01	0	DN	0
723	2519	NEK2	4.89	4.33	-0.56	-3.29	0.00	0.01	0	DN	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
724	30172	C9orf78	5.93	5.38	-0.56	-16.02	0.00	0.01	0	DN	0
725	15223	MEGF8	2.83	2.27	-0.56	-3.99	0.00	0.01	0	DN	0
726	17146	RBM43	2.60	2.04	-0.56	-5.23	0.01	0.00	0	DN	0
727	2465	FAM72A	4.90	4.35	-0.56	-6.79	0.00	0.00	0	DN	0
728	20946	TRIM59	4.01	3.45	-0.56	-7.87	0.01	0.00	0	DN	0
729	24634	BC042616	1.78	1.22	-0.56	-1.84	0.00	0.00	0	DN	0
730	17322	TTC30B	2.04	1.48	-0.56	-4.76	0.00	0.01	0	DN	0
731	2728	IRF2BP2	6.68	6.11	-0.56	-19.55	0.00	0.01	0	DN	0
732	23547	CLK4	2.77	2.20	-0.56	-3.42	0.00	0.01	0	DN	0
733	5955	DYRK4	4.47	3.91	-0.56	-3.38	0.01	0.00	0	DN	0
734	9355	IVD	3.09	2.52	-0.56	-4.88	0.01	0.00	0	DN	0
735	16739	LIPT1	3.59	3.04	-0.56	-1.79	0.01	0.01	0	DN	0
736	2774	CHML	3.04	2.48	-0.56	-6.77	0.00	0.01	0	DN	0
737	12501	ABHD15	3.09	2.53	-0.56	-4.90	0.01	0.00	0	DN	0
738	25245	ARID1B	3.88	3.32	-0.56	-5.03	0.00	0.00	0	DN	0
739	13799	MIB1	4.12	3.56	-0.56	-6.84	0.00	0.00	0	DN	0
740	23402	SLU7	4.11	3.56	-0.56	-2.13	0.01	0.01	0	DN	DN
741	27777	KIAA1549	1.77	1.22	-0.56	-3.66	0.01	0.01	0	DN	0
742	4523	CAT	6.88	6.32	-0.56	-11.05	0.01	0.00	0	DN	0
743	13216	INTS2	2.83	2.28	-0.56	-8.06	0.01	0.01	0	DN	0
744	16874	CKAP2L	4.59	4.03	-0.56	-6.32	0.01	0.01	0	DN	0
745	6847	PLXNC1	3.56	3.01	-0.56	-24.08	0.00	0.01	0	DN	0
746	21995	C4orf3	3.80	3.23	-0.56	-3.17	0.00	0.01	0	DN	0
747	13889	PIK3C3	4.11	3.55	-0.56	-4.22	0.01	0.00	0	DN	0
748	24739	PHF3	4.54	3.98	-0.56	-7.30	0.01	0.01	0	DN	0
749	25062	MED23	3.65	3.09	-0.56	-3.93	0.00	0.01	0	DN	0
750	5215	AK129926	0.88	0.32	-0.56	-1.26	0.01	0.01	0	DN	0
751	27585	C7orf60	1.96	1.40	-0.56	-4.13	0.01	0.01	0	DN	0
752	1636	GOLPH3L	3.60	3.05	-0.56	-2.23	0.00	0.00	0	DN	0
753	1767	GATAD2B	3.43	2.87	-0.56	-4.57	0.00	0.01	0	DN	0
754	12251	USP32P1	3.15	2.59	-0.56	-0.92	0.01	0.00	0	DN	0
755	23799	CMAHP	2.28	1.71	-0.56	-2.63	0.00	0.00	0	DN	0
756	6369	KMT2D	3.03	2.48	-0.56	-1.02	0.01	0.00	0	DN	0
757	19903	NR1D2	3.11	2.56	-0.55	-3.29	0.01	0.00	DN	DN	0
758	1816	THBS3	1.89	1.34	-0.55	-1.13	0.00	0.01	DN	DN	0
759	23510	UNC5A	1.95	1.40	-0.55	-6.25	0.01	0.01	0	DN	0
760	24263	PSMB9	3.79	3.24	-0.55	-7.36	0.00	0.01	0	DN	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
761	551	PTPRU	1.83	1.28	-0.55	-3.70	0.01	0.01	0	DN	0
762	22660	DEPDC1B	4.87	4.32	-0.55	-3.06	0.00	0.01	0	DN	0
763	29943	CDC26	4.30	3.74	-0.55	-4.62	0.00	0.01	0	DN	DN
764	11051	ACSM3	2.19	1.64	-0.55	-5.47	0.01	0.01	0	DN	0
765	3611	FAS	1.80	1.25	-0.55	-6.21	0.01	0.00	0	DN	0
766	19727	RABL2B	2.94	2.39	-0.55	-2.77	0.01	0.00	0	DN	0
767	20987	GPR160	3.91	3.35	-0.55	-2.51	0.01	0.01	0	DN	0
768	16120	CENPA	5.65	5.10	-0.55	-4.02	0.01	0.01	0	DN	0
769	18525	FAM217B	3.99	3.44	-0.55	-3.92	0.01	0.01	0	DN	0
770	10255	TICRR	3.33	2.78	-0.55	-2.29	0.00	0.01	0	DN	0
771	31579	CETN2	4.93	4.37	-0.55	-2.69	0.00	0.00	0	DN	0
772	11192	LOC100289092	3.15	2.60	-0.55	-1.11	0.00	0.01	0	DN	0
773	9894	ANP32A	7.99	7.44	-0.55	-11.10	0.00	0.00	0	DN	0
774	27257	GSAP	3.41	2.87	-0.55	-4.82	0.00	0.00	0	DN	0
775	24564	TRERF1	4.84	4.29	-0.55	-4.43	0.00	0.00	0	DN	0
776	4534	DQ573949	1.08	0.53	-0.55	-2.44	0.01	0.00	0	DN	0
777	23416	HMMR	4.98	4.42	-0.55	-6.58	0.01	0.01	0	DN	0
778	21688	SULT1B1	0.83	0.29	-0.55	-1.56	0.01	0.01	0	DN	0
779	21917	CENPE	4.11	3.56	-0.55	-3.00	0.00	0.00	0	DN	0
780	23350	SAP30L	2.54	1.99	-0.55	-5.24	0.00	0.00	0	DN	0
781	181	H6PD	3.67	3.12	-0.55	-10.00	0.00	0.00	0	DN	0
782	28977	DQ574852	3.77	3.23	-0.55	-2.17	0.00	0.00	0	DN	0
783	16382	PAPOLG	2.35	1.80	-0.55	-5.60	0.00	0.00	0	DN	0
784	995	LEPR	2.18	1.63	-0.55	-2.84	0.01	0.01	0	DN	0
785	19020	CECR6	1.68	1.13	-0.55	-2.62	0.00	0.00	0	DN	0
786	1498	AK123675	4.49	3.94	-0.55	-2.96	0.00	0.00	0	DN	0
787	20042	ZNF445	2.51	1.96	-0.55	-2.43	0.01	0.00	0	DN	0
788	27782	UBN2	1.81	1.25	-0.55	-1.67	0.01	0.01	0	DN	0
789	24789	PHIP	3.24	2.69	-0.55	-2.08	0.01	0.01	0	DN	0
790	9414	DQ586540	1.68	1.13	-0.55	-1.88	0.00	0.01	0	DN	0
791	16491	ZNF638	4.46	3.91	-0.55	-4.40	0.00	0.00	0	DN	0
792	24800	TTK	4.87	4.32	-0.55	-3.29	0.01	0.01	0	DN	0
793	10453	DNM1P46	1.38	0.84	-0.55	-1.48	0.00	0.01	0	DN	0
794	8013	ABHD4	3.24	2.69	-0.55	-3.95	0.00	0.00	0	DN	0
795	31230	TBC1D8B	1.73	1.18	-0.55	-1.14	0.00	0.00	0	DN	0
796	17329	BX538254	1.74	1.20	-0.55	-2.79	0.00	0.01	0	DN	0
797	15809	TMEM86B	3.30	2.75	-0.54	-1.31	0.00	0.00	0	DN	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
798	7570	BC045725	1.21	0.67	-0.54	-1.26	0.00	0.00	0	DN	0
799	27576	IMMP2L	2.89	2.35	-0.54	-5.83	0.01	0.01	0	DN	0
800	705	BMP8B	2.29	1.76	-0.54	-2.61	0.00	0.00	0	DN	0
801	2802	TFB2M	5.14	4.59	-0.54	-2.76	0.01	0.00	0	DN	0
802	28250	CSGALNACT1	1.49	0.96	-0.54	-2.32	0.00	0.01	0	DN	0
803	5594	FDXACB1	2.20	1.66	-0.54	-2.66	0.00	0.01	0	DN	0
804	947	OMA1	4.03	3.48	-0.54	-3.18	0.01	0.01	0	DN	0
805	30206	NTNG2	1.87	1.33	-0.54	-1.79	0.00	0.00	0	DN	0
806	30991	MSN	8.96	8.43	-0.54	-9.75	0.01	0.00	0	DN	0
807	1261	STXBP3	4.20	3.66	-0.54	-5.35	0.01	0.00	0	DN	0
808	2098	RCSD1	5.55	5.01	-0.54	-5.02	0.01	0.01	0	DN	0
809	3769	C10orf2	4.59	4.05	-0.54	-5.32	0.01	0.00	0	DN	0
810	7321	SACS	3.68	3.14	-0.54	-2.94	0.01	0.01	0	DN	0
811	20849	HLTF	4.65	4.11	-0.54	-4.89	0.00	0.00	0	DN	0
812	1156	GLMN	4.18	3.64	-0.54	-7.25	0.01	0.00	0	DN	0
813	29933	SNX30	2.47	1.93	-0.54	-9.72	0.00	0.00	0	DN	0
814	16444	APLF	1.35	0.81	-0.54	-3.24	0.01	0.00	0	DN	0
815	17155	CACNB4	1.66	1.12	-0.54	-4.07	0.00	0.01	0	DN	0
816	23579	CNOT6	4.01	3.47	-0.54	-12.10	0.01	0.00	0	DN	0
817	18130	FRG1B	4.27	3.73	-0.54	-1.83	0.01	0.00	0	DN	0
818	16025	ROCK2	4.16	3.63	-0.54	-4.70	0.01	0.01	0	DN	0
819	13180	DHX40	3.80	3.26	-0.54	-1.40	0.00	0.00	0	DN	0
820	8424	NUMB	4.05	3.51	-0.54	-2.70	0.00	0.01	0	DN	DN
821	28852	MTBP	3.50	2.96	-0.54	-5.60	0.01	0.00	0	DN	0
822	13860	ZNF397	2.37	1.83	-0.54	-1.36	0.01	0.01	0	DN	0
823	29512	PGM5P2	1.06	0.52	-0.54	-3.08	0.00	0.01	0	DN	0
824	1191	RWDD3	3.00	2.47	-0.53	-2.07	0.00	0.01	DN	DN	0
825	11027	SMG1	3.61	3.09	-0.53	-1.31	0.01	0.01	DN	DN	0
826	22654	GAPT	2.58	2.05	-0.53	-1.86	0.00	0.01	0	DN	DN
827	4952	TMEM216	3.11	2.57	-0.53	-1.68	0.01	0.00	0	DN	0
828	332	PADI2	1.31	0.78	-0.53	-3.11	0.01	0.00	0	DN	0
829	1158	GFI1	6.39	5.85	-0.53	-10.20	0.01	0.01	0	DN	0
830	9357	CHST14	4.30	3.77	-0.53	-4.37	0.01	0.01	0	DN	0
831	11957	ITGAE	4.27	3.74	-0.53	-1.27	0.01	0.00	0	DN	0
832	9371	SPINT1	3.14	2.61	-0.53	-3.43	0.00	0.00	0	DN	0
833	18710	N6AMT1	2.84	2.31	-0.53	-5.44	0.01	0.01	0	DN	0
834	13361	RAB37	4.60	4.06	-0.53	-4.95	0.01	0.00	0	DN	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
835	19935	GPD1L	3.81	3.28	-0.53	-7.26	0.00	0.01	0	DN	0
836	3705	ARHGAP19-SLIT1	4.45	3.93	-0.53	-5.96	0.01	0.00	0	DN	0
837	26674	RPA3	4.58	4.04	-0.53	-2.36	0.01	0.00	0	DN	0
838	4963	MYRF	2.38	1.85	-0.53	-2.37	0.01	0.00	0	DN	DN
839	22314	MLF1IP	5.57	5.04	-0.53	-4.09	0.00	0.01	0	DN	0
840	31099	CYSLTR1	4.39	3.87	-0.53	-2.84	0.01	0.01	0	DN	0
841	20256	GLT8D1	4.99	4.46	-0.53	-4.71	0.00	0.01	0	DN	0
842	2398	PPFIA4	0.86	0.33	-0.53	-2.90	0.00	0.01	0	DN	0
843	4044	VENTX	2.68	2.16	-0.53	-1.50	0.01	0.01	0	DN	0
844	24466	FKBP5	7.98	7.45	-0.53	-11.63	0.00	0.01	0	DN	0
845	26787	HOXA13	4.97	4.45	-0.53	-4.21	0.00	0.00	0	DN	0
846	913	TCEANC2	2.71	2.18	-0.53	-9.07	0.01	0.01	0	DN	0
847	9380	OIP5-AS1	5.17	4.65	-0.53	-4.53	0.00	0.00	0	DN	0
848	771	PTPRF	1.43	0.91	-0.53	-4.95	0.00	0.01	0	DN	0
849	13215	BRIP1	2.64	2.11	-0.53	-4.79	0.01	0.01	0	DN	0
850	13066	SPOP	4.32	3.79	-0.53	-5.12	0.00	0.01	0	DN	0
851	23034	PRRC1	4.69	4.16	-0.53	-6.19	0.00	0.01	0	DN	0
852	29017	RHPN1	1.50	0.97	-0.53	-5.41	0.01	0.00	0	DN	0
853	7198	ZNF664	5.47	4.93	-0.53	-6.41	0.01	0.01	0	DN	0
854	13445	MXRA7	3.82	3.29	-0.53	-10.63	0.01	0.01	0	DN	0
855	5777	SPA17	1.70	1.17	-0.53	-1.17	0.01	0.00	0	DN	0
856	9394	JMJD7	3.43	2.90	-0.53	-1.20	0.00	0.00	0	DN	0
857	907	YIPF1	2.99	2.46	-0.53	-2.75	0.01	0.00	0	DN	0
858	21643	REST	3.33	2.79	-0.53	-2.31	0.00	0.01	0	DN	0
859	23022	CSNK1G3	2.93	2.40	-0.53	-5.54	0.00	0.00	0	DN	0
860	20132	IP6K2	4.63	4.10	-0.53	-4.51	0.00	0.00	0	DN	0
861	24585	KLC4	2.96	2.43	-0.53	-2.25	0.01	0.01	0	DN	0
862	22350	FRG1	5.23	4.70	-0.53	-4.08	0.01	0.00	0	DN	0
863	22996	SEMA6A	1.22	0.69	-0.53	-3.46	0.00	0.00	0	DN	0
864	13400	MYO15B	1.37	0.84	-0.53	-0.92	0.01	0.01	0	DN	0
865	5377	AAMDC	2.79	2.26	-0.53	-1.85	0.01	0.00	0	DN	0
866	31240	TSC22D3	3.79	3.26	-0.53	-6.28	0.00	0.01	0	DN	0
867	7146	LOC338799	2.11	1.59	-0.52	-1.18	0.00	0.01	DN	DN	0
868	10215	DQ596274	2.69	2.17	-0.52	-0.96	0.00	0.00	0	DN	0
869	5712	LOC100499227	1.70	1.19	-0.52	-2.03	0.01	0.00	0	DN	0
870	11773	C16orf74	4.00	3.49	-0.52	-2.32	0.01	0.00	0	DN	0
871	18984	S100B	2.58	2.05	-0.52	-2.06	0.01	0.00	0	DN	DN

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
872	28026	PRKAG2-AS1	3.45	2.93	-0.52	-2.10	0.01	0.00	0	DN	0
873	659	CSF3R	3.98	3.47	-0.52	-5.74	0.00	0.00	0	DN	0
874	13566	RAC3	4.00	3.48	-0.52	-2.83	0.01	0.01	0	DN	0
875	29893	CTNNAL1	5.44	4.91	-0.52	-9.43	0.01	0.00	0	DN	0
876	5790	TMEM218	2.63	2.11	-0.52	-5.01	0.00	0.01	0	DN	0
877	14061	TSHZ1	3.80	3.29	-0.52	-2.70	0.00	0.01	0	DN	DN
878	4414	NUCB2	8.09	7.57	-0.52	-7.34	0.01	0.01	0	DN	0
879	19546	MKL1	4.22	3.70	-0.52	-3.47	0.00	0.01	0	DN	0
880	29868	NIPSNAP3A	5.62	5.10	-0.52	-2.69	0.01	0.00	0	DN	0
881	11219	C16orf54	3.21	2.69	-0.52	-5.19	0.00	0.00	0	DN	0
882	1655	TNFAIP8L2	4.35	3.83	-0.52	-3.84	0.00	0.00	0	DN	0
883	30050	OLFML2A	1.08	0.57	-0.52	-6.42	0.00	0.01	0	DN	0
884	7386	HMGB1	8.60	8.08	-0.52	-10.69	0.01	0.01	0	DN	0
885	10998	NDE1	4.75	4.24	-0.52	-4.81	0.00	0.00	0	DN	0
886	20662	TXNRD3	3.02	2.50	-0.52	-2.46	0.00	0.01	0	DN	0
887	23188	IK	5.96	5.44	-0.52	-6.20	0.01	0.01	0	DN	DN
888	880	BTF3L4	4.32	3.80	-0.52	-4.23	0.00	0.00	0	DN	0
889	1258	HENMT1	4.90	4.38	-0.52	-4.04	0.01	0.01	0	DN	0
890	5290	ANAPC15	4.79	4.27	-0.52	-3.36	0.00	0.00	0	DN	0
891	16853	BCL2L11	4.02	3.50	-0.52	-5.88	0.01	0.00	0	DN	0
892	28070	ESYT2	6.61	6.09	-0.52	-3.38	0.00	0.00	0	DN	0
893	5549	AASDHPPT	5.36	4.85	-0.52	-5.72	0.01	0.00	0	DN	0
894	10746	HAGH	3.15	2.63	-0.52	-3.04	0.01	0.01	0	DN	0
895	16024	PQLC3	3.52	3.00	-0.52	-3.18	0.01	0.01	0	DN	0
896	21022	TBL1XR1	5.01	4.49	-0.52	-25.08	0.00	0.01	0	DN	0
897	2797	EFCAB2	3.28	2.76	-0.52	-2.20	0.00	0.00	0	DN	0
898	18112	AX747658	1.72	1.19	-0.52	-1.01	0.01	0.00	0	DN	0
899	7215	TMEM132B	1.94	1.41	-0.52	-4.46	0.01	0.00	0	DN	0
900	16332	ASB3	3.52	2.99	-0.52	-2.43	0.01	0.01	0	DN	0
901	1385	SLC22A15	2.59	2.07	-0.52	-3.84	0.00	0.00	0	DN	0
902	14886	DPY19L3	3.70	3.18	-0.52	-2.68	0.01	0.00	0	DN	0
903	14339	INSR	2.54	2.02	-0.52	-3.11	0.01	0.00	0	DN	0
904	23534	LOC202181	1.96	1.45	-0.52	-0.77	0.01	0.01	0	DN	0
905	4719	PHF21A	2.44	1.92	-0.52	-2.39	0.00	0.00	0	DN	0
906	16208	YIPF4	4.21	3.69	-0.52	-2.88	0.00	0.00	0	DN	0
907	6874	AX747187	2.59	2.07	-0.52	-0.93	0.01	0.00	0	DN	0
908	22843	MTRNR2L2	9.15	8.63	-0.52	-2.11	0.00	0.00	0	DN	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
909	31092	ATRX	3.46	2.94	-0.52	-3.18	0.01	0.00	0	DN	0
910	30542	MSL3	4.09	3.57	-0.52	-4.53	0.01	0.00	0	DN	0
911	9823	AK091624	3.41	2.88	-0.52	-1.43	0.01	0.01	0	DN	0
912	31219	LOC286437	2.32	1.80	-0.52	-1.62	0.00	0.01	0	DN	0
913	29507	LOC642236	2.00	1.49	-0.52	-3.12	0.00	0.01	0	DN	0
914	12309	USP32P2	1.31	0.80	-0.51	-1.39	0.01	0.01	DN	DN	0
915	22935	PAM	3.30	2.78	-0.51	-1.36	0.01	0.00	0	DN	0
916	20098	KIF9	3.19	2.68	-0.51	-1.11	0.00	0.01	0	DN	0
917	19148	TMEM191C	1.61	1.09	-0.51	-2.45	0.01	0.00	0	DN	0
918	29391	PAX5	2.14	1.63	-0.51	-1.43	0.01	0.00	0	DN	0
919	19228	CABIN1	4.99	4.48	-0.51	-6.47	0.00	0.01	0	DN	0
920	10787	ABCA3	2.80	2.29	-0.51	-2.20	0.00	0.00	0	DN	0
921	16324	MSH6	5.58	5.07	-0.51	-20.50	0.01	0.01	0	DN	0
922	15817	SUV420H2	3.45	2.94	-0.51	-3.73	0.01	0.00	0	DN	0
923	20263	MUSTN1	4.14	3.63	-0.51	-2.58	0.01	0.00	0	DN	0
924	25268	TAGAP	3.38	2.87	-0.51	-3.75	0.00	0.01	0	DN	0
925	9381	BC067230	5.07	4.57	-0.51	-20.76	0.01	0.01	0	DN	0
926	30560	TRAPPC2	2.87	2.37	-0.51	-2.59	0.01	0.01	0	DN	0
927	22691	NLN	4.69	4.18	-0.51	-4.09	0.00	0.01	0	DN	0
928	30402	AF079515	8.19	7.67	-0.51	-4.94	0.00	0.00	0	DN	0
929	23777	MBOAT1	2.28	1.78	-0.51	-2.99	0.01	0.01	0	DN	0
930	20167	RNF123	4.10	3.59	-0.51	-4.53	0.00	0.00	0	DN	0
931	21237	FYTTD1	4.60	4.09	-0.51	-4.90	0.00	0.00	0	DN	0
932	16164	MRPL33	6.22	5.70	-0.51	-3.82	0.01	0.01	0	DN	0
933	16436	ETAA1	2.92	2.41	-0.51	-5.05	0.00	0.00	0	DN	0
934	20363	FRMD4B	2.23	1.72	-0.51	-3.81	0.00	0.00	0	DN	0
935	16862	TMEM87B	4.00	3.49	-0.51	-6.98	0.01	0.01	0	DN	0
936	13645	SMCHD1	4.95	4.44	-0.51	-4.69	0.00	0.00	0	DN	0
937	13748	GNAL	1.02	0.51	-0.51	-6.63	0.00	0.01	0	DN	0
938	30666	GK	4.23	3.72	-0.51	-3.54	0.01	0.00	0	DN	0
939	12090	CHRNB1	1.76	1.25	-0.51	-1.69	0.01	0.00	0	DN	0
940	16287	PPM1B	5.06	4.55	-0.51	-8.24	0.00	0.00	0	DN	0
941	9273	WHAMMP1	4.59	4.07	-0.51	-1.15	0.00	0.01	0	DN	0
942	18078	CR627206	1.19	0.68	-0.51	-1.38	0.00	0.01	0	DN	0
943	27325	RBM48	3.08	2.57	-0.51	-2.51	0.01	0.00	0	DN	0
944	31038	OGT	5.86	5.35	-0.51	-1.49	0.01	0.01	0	DN	0
945	29277	AX747756	3.13	2.62	-0.51	-0.97	0.01	0.01	0	DN	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
946	9148	APBA2	3.47	2.96	-0.51	-10.51	0.00	0.01	0	DN	0
947	7551	TRIM13	4.22	3.72	-0.51	-2.83	0.00	0.00	0	DN	0
948	7330	BC043582	2.69	2.18	-0.51	-17.32	0.00	0.01	0	DN	0
949	6608	PRIM1	4.45	3.95	-0.51	-3.40	0.01	0.00	0	DN	0
950	6531	ITGA5	6.70	6.19	-0.51	-7.91	0.01	0.00	0	DN	0
951	5714	PVRL1	3.75	3.24	-0.51	-4.45	0.01	0.00	0	DN	0
952	3858	MXI1	3.89	3.38	-0.51	-6.69	0.01	0.00	0	DN	0
953	2959	UPF2	3.87	3.37	-0.51	-2.97	0.01	0.00	0	DN	DN
954	2754	MTR	3.71	3.20	-0.51	-3.97	0.00	0.01	0	DN	0
955	2544	SMYD2	4.66	4.15	-0.51	-3.87	0.01	0.00	0	DN	0
956	582	CCDC28B	4.25	3.73	-0.51	-1.68	0.01	0.01	0	DN	0
957	29776	PTCH1	1.95	1.45	-0.50	-1.40	0.01	0.01	0	DN	0
958	28816	ENY2	4.94	4.44	-0.50	-3.39	0.01	0.00	0	DN	0
959	28689	DECR1	4.86	4.36	-0.50	-3.85	0.00	0.01	0	DN	0
960	23747	JARID2	4.26	3.76	-0.50	-5.07	0.01	0.01	0	DN	0
961	22870	RASA1	3.81	3.31	-0.50	-8.61	0.01	0.01	0	DN	0
962	21660	CENPC1	3.44	2.93	-0.50	-8.08	0.00	0.01	0	DN	0
963	20371	EIF4E3	4.33	3.83	-0.50	-4.42	0.00	0.00	0	DN	0
964	18673	C21orf91-OT1	2.61	2.11	-0.50	-2.30	0.00	0.00	0	DN	0
965	16712	CNNM3	3.28	2.78	-0.50	-5.36	0.01	0.00	0	DN	0
966	16188	YPEL5	3.13	2.63	-0.50	-2.83	0.00	0.00	0	DN	0
967	13989	NEDD4L	2.58	2.08	-0.50	-1.36	0.01	0.01	0	DN	0
968	11539	HSF4	1.46	0.96	-0.50	-0.87	0.01	0.00	0	DN	0
969	8093	CTSG	10.44	9.94	-0.50	-9.61	0.00	0.00	0	DN	0
970	6281	FGD4	2.13	1.62	-0.50	-7.77	0.00	0.00	0	DN	0
971	3403	MCU	4.46	3.96	-0.50	-4.72	0.00	0.01	0	DN	0
972	3364	LRRC20	3.19	2.69	-0.50	-4.08	0.01	0.01	0	DN	0
973	2337	PTPRC	5.60	5.09	-0.50	-8.53	0.01	0.00	0	DN	0
974	2312	RGS2	1.51	1.00	-0.50	-2.00	0.00	0.01	0	DN	0
975	932	USP24	4.28	3.77	-0.50	-3.12	0.01	0.00	0	DN	0
Genes with expression up-regulated by BRD0320 vs Control											
1	19385	HMOX1	2.36	6.00	3.65	18.56	0.00	0.00	UP	UP	UP
2	2049	OLFML2B	2.69	6.09	3.40	44.07	0.01	0.00	UP	UP	UP
3	17941	SIGLEC1	0.69	4.03	3.33	53.15	0.01	0.01	0	UP	0
4	1970	CD48	2.01	5.10	3.09	16.75	0.00	0.00	UP	UP	UP
5	15388	C5AR1	1.08	4.11	3.03	24.45	0.00	0.01	UP	UP	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
6	2475	IL10	0.24	3.21	2.98	17.62	0.00	0.00	0	UP	0
7	28674	ATP6V0D2	0.81	3.73	2.92	13.20	0.01	0.01	0	UP	0
8	6767	PHLDA1	0.90	3.61	2.71	17.67	0.00	0.00	0	UP	0
9	18307	MAFB	1.46	4.14	2.68	16.29	0.00	0.00	UP	UP	0
10	13505	SLC26A11	0.56	3.18	2.62	19.95	0.00	0.00	UP	UP	0
11	24487	CDKN1A	1.80	4.32	2.52	9.67	0.00	0.00	UP	UP	0
12	1971	SLAMF7	0.21	2.66	2.45	8.18	0.00	0.01	UP	UP	0
13	12610	CCL3	0.79	3.22	2.43	8.33	0.00	0.01	UP	UP	0
14	21212	TM4SF19-TCTEX1D2	1.21	3.61	2.40	6.62	0.01	0.00	UP	UP	0
15	110	TNFRSF14	2.85	5.24	2.39	17.83	0.00	0.00	UP	UP	UP
16	29194	PLIN2	3.98	6.26	2.28	12.25	0.00	0.01	0	UP	UP
17	16245	GALM	0.48	2.74	2.26	13.75	0.01	0.00	0	UP	0
18	12567	CCL2	5.33	7.56	2.24	13.13	0.00	0.01	0	UP	0
19	28651	FABP4	2.15	4.39	2.24	9.51	0.01	0.01	0	UP	0
20	22785	ENC1	1.48	3.67	2.19	8.51	0.00	0.00	0	UP	0
21	7062	SDS	1.28	3.47	2.19	11.94	0.01	0.01	0	UP	UP
22	950	JUN	3.35	5.51	2.16	45.21	0.00	0.00	UP	UP	UP
23	22181	TDO2	0.20	2.33	2.14	13.09	0.00	0.01	0	UP	UP
24	12609	CCL18	0.19	2.30	2.11	4.39	0.00	0.00	0	UP	0
25	20074	CCR1	2.25	4.33	2.07	10.77	0.01	0.00	0	UP	0
26	16244	HNRPLL	0.16	2.18	2.02	12.47	0.00	0.00	0	UP	0
27	6163	EMP1	1.97	3.94	1.98	8.08	0.01	0.00	0	UP	0
28	2276	NCF2	3.31	5.24	1.93	13.80	0.00	0.01	UP	UP	UP
29	5527	MMP1	1.13	3.01	1.89	8.15	0.00	0.01	0	UP	0
30	108	LOC100133445	0.84	2.73	1.89	8.02	0.01	0.00	0	UP	0
31	8033	SLC7A8	1.97	3.84	1.87	26.32	0.01	0.00	0	UP	0
32	3385	DDIT4	4.08	5.93	1.85	7.94	0.00	0.00	UP	UP	0
33	6038	C3AR1	1.64	3.49	1.85	11.54	0.01	0.00	0	UP	UP
34	23363	HAVCR2	1.31	3.13	1.82	13.66	0.01	0.00	0	UP	0
35	4144	CTSD	10.08	11.89	1.81	36.39	0.00	0.00	UP	UP	UP
36	29824	TBC1D2	4.04	5.82	1.78	31.01	0.00	0.01	UP	UP	UP
37	12100	CD68	5.84	7.61	1.77	20.30	0.01	0.01	UP	UP	UP
38	7050	OAS1	1.46	3.22	1.76	9.40	0.00	0.01	0	UP	0
39	8379	ZFP36L1	0.59	2.34	1.75	10.01	0.01	0.01	0	UP	0
40	7490	LACC1	1.90	3.63	1.73	35.05	0.00	0.01	0	UP	DN
41	24150	IER3	0.60	2.31	1.71	4.60	0.01	0.01	0	UP	0
42	4920	MS4A4A	3.19	4.87	1.68	13.32	0.01	0.00	0	UP	UP

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
43	11180	NUPR1	0.85	2.53	1.67	3.06	0.00	0.00	0	UP	0
44	27690	KCP	1.71	3.38	1.67	3.82	0.00	0.00	0	UP	0
45	5761	VWA5A	2.30	3.93	1.64	8.81	0.01	0.01	0	UP	0
46	28240	MTUS1	0.64	2.28	1.64	23.45	0.00	0.01	0	UP	0
47	14026	SERPINB2	6.79	8.43	1.64	11.71	0.01	0.01	0	UP	DN
48	25096	SGK1	2.38	4.00	1.62	10.39	0.01	0.00	0	UP	0
49	576	BC069257	1.01	2.60	1.59	5.16	0.01	0.01	0	UP	0
50	8015	SLC7A7	2.03	3.57	1.54	17.76	0.01	0.01	0	UP	UP
51	22065	SLC7A11	1.81	3.35	1.54	19.60	0.01	0.00	0	UP	0
52	28615	LY96	1.66	3.19	1.53	3.87	0.00	0.01	UP	UP	UP
53	15542	IL4I1	0.81	2.33	1.52	8.90	0.01	0.01	0	UP	UP
54	11197	LAT	3.73	5.26	1.52	18.25	0.01	0.00	0	UP	0
55	434	FUCA1	5.32	6.82	1.51	13.08	0.00	0.00	0	UP	DN
56	24218	NEU1	5.51	7	1.48	23.34	0.01	0.01	UP	UP	UP
57	16798	SULT1C2	0.47	1.94	1.48	4.576	0	0	0	UP	0
58	14723	IFI30	7.07	8.54	1.47	12.36	0.01	0	UP	UP	UP
59	22697	CD180	2.87	4.34	1.47	12.14	0.01	0.01	0	UP	UP
60	16918	MARCO	2.84	4.29	1.45	7.805	0.01	0.01	UP	UP	UP
61	12568	CCL7	0.54	2	1.45	6.134	0	0.01	0	UP	0
62	9980	CYP1A1	1.28	2.72	1.44	4.235	0.01	0	0	UP	DN
63	14973	CD22	1.02	2.45	1.43	4.903	0	0.01	0	UP	0
64	11746	OSGIN1	1.79	3.21	1.42	11.55	0	0.01	UP	UP	0
65	23317	SMIM3	3.91	5.32	1.41	3.117	0.01	0.01	0	UP	0
66	14732	GDF15	0.08	1.49	1.41	13.05	0.01	0	0	UP	0
67	831	DMBX1	0.23	1.63	1.41	11.34	0	0.01	0	UP	0
68	24621	SPATS1	0.03	1.43	1.4	5.401	0	0.01	0	UP	0
69	8872	TDRD9	1.03	2.42	1.39	7.162	0	0.01	0	UP	0
70	10794	AMDHD2	2.9	4.29	1.38	7.053	0.01	0	UP	UP	0
71	26981	UPP1	3.08	4.43	1.35	11.11	0	0	0	UP	0
72	28845	NOV	4.4	5.74	1.34	28.5	0	0	0	UP	UP
73	4172	SLC22A18AS	0.94	2.28	1.34	13.29	0.01	0.01	0	UP	UP
74	20247	STAB1	0.11	1.43	1.32	12.83	0.01	0	0	UP	0
75	3438	PLAU	4.14	5.45	1.3	11.52	0	0	UP	UP	UP
76	28481	ATP6V1H	5.13	6.43	1.3	10.07	0	0.01	0	UP	UP
77	13540	TSPAN10	2.41	3.7	1.29	3.438	0	0.01	UP	UP	UP
78	1990	FCER1G	6.78	8.04	1.26	16.47	0.01	0.01	UP	UP	0
79	17122	ZEB2_AS1_1	0.2	1.46	1.25	1.565	0	0.01	0	UP	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
80	18447	AK307192	0.99	2.24	1.24	3.773	0.01	0	0	UP	0
81	14693	ABHD8	2.61	3.84	1.23	9.653	0	0	UP	UP	0
82	27120	TPST1	2.38	3.61	1.23	9.625	0	0.01	0	UP	UP
83	17769	ARL4C	0.67	1.89	1.23	5.181	0.01	0.01	0	UP	0
84	16171	FOSL2	3.6	4.82	1.22	18.68	0	0.01	0	UP	0
85	15997	ID2	5.19	6.4	1.21	7.691	0	0	UP	UP	0
86	14264	SEMA6B	3.12	4.32	1.2	12.02	0.01	0.01	0	UP	DN
87	15292	BCL3	1.46	2.66	1.2	9.981	0	0.01	0	UP	0
88	22529	IL7R	0.72	1.92	1.2	7.166	0.01	0	0	UP	0
89	31616	MIR718	1	2.2	1.2	0.919	0	0.01	0	UP	0
90	20249	SMIM4	5.24	6.42	1.19	5.892	0.01	0	0	UP	0
91	8472	JDP2	3.43	4.62	1.19	10.89	0	0.01	0	UP	0
92	5523	MMP8	0.2	1.39	1.19	8.013	0.01	0	0	UP	0
93	3253	BC039561	1.87	3.05	1.18	1.746	0	0.01	0	UP	0
94	6335	SLC48A1	2.89	4.07	1.18	6.588	0.01	0	0	UP	0
95	28959	ST3GAL1	3.92	5.09	1.17	15.06	0	0	UP	UP	UP
96	14539	DNASE2	5.22	6.39	1.17	19.18	0.01	0.01	0	UP	UP
97	5371	MYO7A	3.6	4.77	1.17	8.76	0	0.01	0	UP	0
98	182	SPSB1	1.54	2.71	1.17	7.875	0	0	0	UP	0
99	28190	CTSB	6.97	8.14	1.17	13.46	0	0.01	0	UP	0
100	540	RAB42	0.08	1.24	1.17	3.406	0.01	0	0	UP	0
101	15468	FTL	11.62	12.77	1.15	17.16	0	0.01	0	UP	0
102	9376	CHAC1	1.08	2.22	1.15	3.977	0	0.01	0	UP	0
103	6634	DDIT3	3.21	4.36	1.15	3.46	0.01	0.01	0	UP	UP
104	2278	RGL1	0.42	1.56	1.15	6.948	0	0	0	UP	0
105	3070	APBB1IP	4.15	5.27	1.13	9.877	0.01	0	0	UP	0
106	5551	GUCY1A2	0.64	1.77	1.13	11.9	0	0.01	0	UP	0
107	28785	KLF10	2.84	3.96	1.12	6.841	0	0.01	UP	UP	0
108	1755	S100A2	0.85	1.97	1.12	4.675	0.01	0.01	0	UP	0
109	31609	RENBP	5.22	6.33	1.11	5.938	0	0.01	0	UP	UP
110	2260	GLUL	7.29	8.4	1.11	24.63	0.01	0.01	0	UP	UP
111	6162	GSG1	2.36	3.47	1.11	3.36	0.01	0	0	UP	0
112	9838	PLEKHO2	3.31	4.41	1.1	13.43	0.01	0.01	0	UP	0
113	26742	GPNMB	7.56	8.64	1.09	12.75	0	0	0	UP	UP
114	1543	AK023809	1.57	2.66	1.09	2.808	0.01	0.01	0	UP	0
115	8607	GPR68	0.76	1.86	1.09	3.637	0.01	0	0	UP	DN
116	19815	PPARG	3.91	4.99	1.09	26.97	0	0.01	0	UP	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
117	9652	AQP9	0.23	1.32	1.09	10.51	0	0	0	UP	0
118	30933	AY927613	1.77	2.86	1.09	1.087	0.01	0	0	UP	0
119	13517	BAIAP2	2.02	3.1	1.08	8.119	0	0.01	0	UP	0
120	20248	NT5DC2	4.72	5.81	1.08	10.57	0.01	0.01	0	UP	0
121	7063	SDSL	2.43	3.51	1.08	5.093	0	0	0	UP	UP
122	28846	ENPP2	0.33	1.41	1.08	5.195	0.01	0	0	UP	0
123	17700	SP140	0.52	1.6	1.08	6.833	0.01	0	0	UP	0
124	5659	FXYD2	2.04	3.1	1.07	5.862	0	0	0	UP	0
125	24902	PRDM1	0.61	1.69	1.07	6.881	0	0.01	0	UP	0
126	21203	TFRC	5.67	6.73	1.06	16.02	0	0.01	UP	UP	UP
127	28392	ZNF703	4.02	5.09	1.06	9.479	0	0.01	0	UP	0
128	3524	ZMIZ1-AS1	1.86	2.93	1.06	4.159	0	0.01	0	UP	0
129	2800	SMYD3	5.13	6.2	1.06	14.52	0.01	0.01	0	UP	0
130	10094	BCL2A1	5.39	6.44	1.05	6.684	0	0	0	UP	0
131	18575	BIRC7	1.01	2.03	1.03	2.834	0.01	0	0	UP	UP
132	17404	NABP1	3.57	4.6	1.03	5.531	0.01	0.01	0	UP	0
133	15460	PPP1R15A	4.43	5.46	1.03	11.31	0	0	0	UP	0
134	16964	HS6ST1	4.94	5.96	1.02	14.3	0	0	0	UP	0
135	3725	GOLGA7B	2.05	3.07	1.02	5.429	0	0.01	0	UP	0
136	22198	FNIP2	3	4.02	1.02	11.22	0	0.01	0	UP	0
137	15545	ATF5	4.61	5.63	1.01	11.71	0	0	0	UP	0
138	11559	ATP6V0D1	4.93	5.94	1.01	13.84	0.01	0	0	UP	0
139	25169	STX11	2.3	3.31	1.01	2.26	0	0.01	0	UP	0
140	14261	PLIN4	0.59	1.6	1.01	5.119	0	0	0	UP	0
141	4873	LPXN	6.73	7.74	1.01	16.75	0	0.01	0	UP	0
142	8632	TMEM251	4.44	5.45	1.01	5.163	0	0	0	UP	UP
143	938	PPAP2B	0.78	1.78	1.01	4.262	0.01	0	0	UP	UP
144	4567	CD82	5.35	6.36	1	7.514	0.01	0.01	UP	UP	UP
145	532	SESN2	2.78	3.77	1	12.26	0.01	0.01	0	UP	0
146	23326	GM2A	5.52	6.51	1	9.2	0	0	0	UP	UP
147	4939	SLC15A3	1.8	2.8	0.99	5.812	0.01	0.01	0	UP	0
148	27124	KCTD7	2.52	3.52	0.99	6.805	0	0.01	0	UP	UP
149	3128	CREM	3.2	4.18	0.98	5.031	0.01	0.01	0	UP	0
150	7051	OAS3	3.14	4.12	0.98	12.04	0.01	0	0	UP	0
151	2620	CNIH3	2.12	3.1	0.98	6.841	0	0.01	0	UP	0
152	23459	SH3PXD2B	1.12	2.1	0.98	6.413	0.01	0.01	0	UP	0
153	6025	CD163	0.06	1.03	0.97	10.99	0.01	0.01	0	UP	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
154	432	GALE	5.44	6.39	0.96	13.61	0.01	0.01	0	UP	UP
155	11196	SPNS1	4.56	5.52	0.96	9.727	0	0	0	UP	0
156	2529	ATF3	1.12	2.08	0.96	4.388	0.01	0	0	UP	0
157	15458	HSD17B14	1.17	2.12	0.96	3.037	0.01	0.01	0	UP	UP
158	8312	SLC38A6	2.13	3.09	0.96	14.31	0	0.01	0	UP	0
159	18085	THBD	2.92	3.86	0.95	8.024	0.01	0.01	0	UP	0
160	11483	KIFC3	1.86	2.81	0.95	3.578	0	0.01	0	UP	0
161	23175	CYSTM1	3.42	4.37	0.95	9.195	0	0.01	0	UP	0
162	1208	FRRS1	1.46	2.4	0.95	10.51	0	0	0	UP	UP
163	1852	LMNA	6.39	7.33	0.94	20.33	0.01	0.01	0	UP	0
164	12228	TRIM16	2.79	3.73	0.94	6.885	0	0	0	UP	0
165	13809	NPC1	6.07	7.01	0.94	15.64	0.01	0.01	0	UP	UP
166	4173	SLC22A18	3.4	4.33	0.93	4.422	0	0.01	UP	UP	0
167	29745	NINJ1	3.64	4.57	0.93	6.999	0.01	0	0	UP	0
168	18116	ABHD12	5.7	6.63	0.93	12.7	0	0.01	0	UP	0
169	7297	GJB2	4.26	5.18	0.92	6.224	0	0.01	UP	UP	UP
170	16119	SLC35F6	3.76	4.67	0.92	10.66	0.01	0	0	UP	0
171	6562	CD63	7.79	8.7	0.91	9.935	0	0.01	0	UP	UP
172	15760	OSCAR	3.26	4.17	0.91	3.995	0	0.01	0	UP	0
173	22235	PALLD	2.17	3.08	0.91	9.439	0.01	0	0	UP	0
174	23285	ABLIM3	0.32	1.23	0.91	4.631	0.01	0.01	0	UP	0
175	18396	CTSA	6.46	7.36	0.9	19.08	0.01	0	0	UP	0
176	24916	OSTM1	2.98	3.88	0.9	14.56	0.01	0	0	UP	0
177	22191	TMEM144	1.41	2.31	0.9	4.964	0	0.01	0	UP	0
178	24221	C2	3.62	4.52	0.9	11.28	0.01	0	0	UP	0
179	11908	MIR22HG	0.61	1.51	0.9	1.619	0.01	0	0	UP	0
180	30468	SLC25A6	6.82	7.7	0.89	19.02	0	0	0	UP	0
181	27374	BRI3	7.1	7.98	0.89	18.02	0	0.01	0	UP	UP
182	19383	TOM1	3.53	4.42	0.88	6.032	0	0	0	UP	UP
183	28243	ASAH1	7.37	8.25	0.88	8.701	0	0.01	0	UP	UP
184	17957	SMOX	3.65	4.53	0.88	6.379	0	0.01	0	UP	0
185	15770	LILRB3	1.51	2.4	0.88	5.395	0	0	0	UP	0
186	8032	CEBPE	3.53	4.41	0.87	9.643	0	0	0	UP	0
187	27559	SnoU109	0.3	1.18	0.87	1.544	0	0	0	UP	0
188	28850	COL14A1	0.39	1.26	0.87	4.501	0.01	0.01	0	UP	0
189	10721	TPSAB1	8.2	9.06	0.86	33.74	0.01	0	0	UP	0
190	27229	CCL26	0.73	1.58	0.86	1.824	0	0.01	0	UP	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
191	21840	SPP1	0.22	1.08	0.86	3.75	0	0.01	0	UP	0
192	5057	ESRRA	4.42	5.27	0.85	6.335	0	0.01	0	UP	UP
193	538	SNHG12	4.67	5.53	0.85	2.305	0.01	0	0	UP	UP
194	3006	VIM	7.82	8.68	0.85	16.57	0.01	0.01	0	UP	0
195	21814	AGPAT9	1.49	2.34	0.85	4.879	0.01	0	0	UP	0
196	6157	HEBP1	4.74	5.59	0.85	5.78	0.01	0.01	0	UP	0
197	2501	LAMB3	1.28	2.13	0.85	5.346	0	0	0	UP	0
198	15304	ZNF296	2.91	3.75	0.84	13.25	0	0.01	UP	UP	0
199	4974	FTH1	7.64	8.48	0.84	9.027	0	0	0	UP	0
200	21301	ZFYVE28	1.91	2.75	0.84	7.213	0.01	0	0	UP	0
201	29990	TRAF1	0.49	1.33	0.84	5.401	0.01	0	0	UP	0
202	18446	CEBPB	5.08	5.91	0.83	15.47	0.01	0.01	UP	UP	0
203	14345	MCOLN1	2.74	3.57	0.83	5.904	0	0	0	UP	0
204	12067	DVL2	3.72	4.55	0.83	6.032	0	0	0	UP	0
205	18369	SDC4	3.57	4.4	0.83	5.717	0	0	0	UP	0
206	2378	ARL8A	4.32	5.15	0.83	10.95	0	0	0	UP	0
207	2268	NPL	2.32	3.15	0.83	9.445	0.01	0.01	0	UP	0
208	11857	MC1R	3.42	4.25	0.83	8.002	0.01	0.01	0	UP	0
209	12220	PMP22	0.23	1.06	0.83	2.453	0.01	0	0	UP	0
210	11283	LOC100862671	0	0.82	0.82	1.272	0.01	0.01	0	UP	0
211	29744	C9orf89	4.22	5.04	0.82	6.663	0	0.01	0	UP	0
212	16217	RASGRP3	0.64	1.46	0.82	13.97	0	0	0	UP	0
213	28647	PAG1	2.59	3.42	0.82	13.71	0	0	0	UP	0
214	27398	CYP3A5	0.39	1.21	0.82	3.795	0	0.01	0	UP	0
215	11639	VAC14	4.63	5.44	0.81	5.817	0.01	0	0	UP	0
216	5043	FERMT3	6.45	7.26	0.8	15.62	0	0	0	UP	0
217	15751	NLRP12	1	1.8	0.8	3.564	0	0.01	0	UP	0
218	10793	ATP6V0C	6.99	7.79	0.8	16.81	0	0.01	0	UP	0
219	24932	SMPD2	3.25	4.04	0.8	4.56	0	0.01	0	UP	0
220	22561	PTGER4	2.86	3.66	0.8	7.049	0	0	0	UP	UP
221	24848	RRAGD	3.26	4.06	0.8	11.42	0.01	0.01	0	UP	UP
222	7089	WSB2	3.47	4.26	0.79	5.049	0	0.01	0	UP	0
223	21341	EVC	0.05	0.85	0.79	8.656	0.01	0	0	UP	0
224	16461	MXD1	1.92	2.71	0.79	2.75	0.01	0	0	UP	0
225	31633	ATP6AP1	6.77	7.55	0.78	14.5	0	0	0	UP	0
226	27367	ASNS	3.48	4.26	0.78	5.06	0.01	0.01	0	UP	0
227	4164	CD81	0.98	1.75	0.78	7.201	0.01	0	0	UP	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
228	15160	BLVRB	6.16	6.93	0.77	8.917	0	0	0	UP	0
229	12966	MAP3K14	1.56	2.34	0.77	6.508	0.01	0.01	0	UP	0
230	29056	MROH1	3.83	4.6	0.77	3.586	0	0.01	0	UP	0
231	568	LOC149086	0.43	1.19	0.77	3.35	0	0.01	0	UP	0
232	16486	NAGK	3.46	4.23	0.77	5.913	0	0.01	0	UP	UP
233	20571	ARHGAP31	1.39	2.15	0.77	9.772	0	0.01	0	UP	0
234	23999	FKSG63	3.87	4.63	0.76	2.412	0.01	0.01	UP	UP	0
235	13596	METRNL	4.8	5.56	0.76	4.187	0.01	0	0	UP	0
236	21736	CXCL2	0.48	1.23	0.76	2.747	0	0	0	UP	0
237	15389	C5AR2	0.48	1.24	0.76	1.957	0	0.01	0	UP	0
238	28786	AK127183	0.51	1.27	0.76	4.245	0.01	0	0	UP	0
239	20126	UCN2	0.95	1.7	0.76	2.523	0.01	0.01	0	UP	0
240	21539	RBM47	2.3	3.07	0.76	5.037	0.01	0.01	0	UP	0
241	8535	GPR65	1.4	2.17	0.76	1.548	0	0	0	UP	UP
242	27872	KEL	1.05	1.81	0.76	6.208	0	0.01	0	UP	0
243	15158	SERTAD1	2.2	2.97	0.76	2.94	0	0	0	UP	0
244	21201	SDHAP1	2.94	3.69	0.76	1.956	0.01	0	0	UP	0
245	4174	PHLDA2	1.55	2.3	0.75	3.629	0	0	0	UP	0
246	3695	BLNK	2.12	2.87	0.75	2.958	0.01	0.01	0	UP	UP
247	13143	CUEDC1	2.15	2.9	0.75	7.963	0.01	0.01	0	UP	0
248	4177	CARS	5	5.75	0.75	8.421	0	0.01	0	UP	0
249	435	CNR2	0.45	1.2	0.75	9.184	0	0.01	0	UP	0
250	8375	ZFYVE26	4.01	4.76	0.75	4.02	0	0.01	0	UP	UP
251	3800	NFKB2	3.47	4.23	0.75	10.99	0.01	0	0	UP	0
252	6099	CLEC7A	0.56	1.31	0.75	3.255	0	0	0	UP	0
253	24776	CD109	1.81	2.56	0.75	8.622	0	0.01	0	UP	0
254	8897	NUDT14	3.42	4.16	0.74	4.556	0.01	0.01	UP	UP	0
255	1419	PHGDH	6.57	7.31	0.74	10.92	0.01	0.01	0	UP	UP
256	10740	NME3	1.04	1.78	0.74	3.429	0.01	0	0	UP	0
257	14728	JUND	5.07	5.81	0.74	29.3	0.01	0.01	0	UP	0
258	17829	GPR35	2.24	2.98	0.74	11.96	0.01	0.01	0	UP	0
259	27596	TFEC	3.75	4.5	0.74	5.28	0	0.01	0	UP	UP
260	30592	SCML1	2.81	3.56	0.74	5.296	0	0.01	0	UP	UP
261	2214	SOAT1	3.91	4.65	0.74	17.67	0	0.01	0	UP	0
262	6953	SLC41A2	0.82	1.57	0.74	4.696	0	0	0	UP	0
263	11404	NOD2	1.16	1.9	0.73	1.368	0	0	UP	UP	0
264	26624	AP5Z1	3.52	4.25	0.73	4.591	0	0.01	0	UP	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
265	14978	FFAR2	0.93	1.66	0.73	3.716	0	0	0	UP	0
266	5204	CORO1B	3.73	4.46	0.73	24.05	0	0	0	UP	0
267	3832	SH3PXD2A	2.8	3.53	0.73	4.681	0	0.01	0	UP	DN
268	12900	TMEM106A	1.9	2.63	0.73	2.659	0.01	0	0	UP	0
269	285	UQCRHL	1.4	2.12	0.72	0.924	0.01	0	0	UP	0
270	24824	SNORD50B	2.16	2.88	0.72	1.119	0	0.01	0	UP	0
271	23177	HBEGF	1.53	2.25	0.72	3.276	0.01	0	0	UP	0
272	14141	MIDN	3.8	4.52	0.72	15.11	0	0.01	0	UP	0
273	19407	NCF4	6.46	7.17	0.72	5.67	0	0	0	UP	0
274	1770	SLC39A1	5.16	5.88	0.72	22.02	0	0.01	0	UP	0
275	16300	EPAS1	2.5	3.23	0.72	8.621	0	0	0	UP	0
276	30774	GPR34	0.91	1.63	0.72	2.642	0	0.01	0	UP	0
277	14244	MAP2K2	6.5	7.21	0.71	13.86	0	0.01	0	UP	0
278	23746	CD83	3.2	3.91	0.71	15.3	0.01	0.01	0	UP	0
279	24606	VEGFA	5.03	5.74	0.71	3.542	0	0	0	UP	0
280	27688	ATP6V1F	7.28	7.98	0.7	11.87	0.01	0	0	UP	0
281	9491	SHC4	0.54	1.24	0.7	3.121	0.01	0	0	UP	0
282	196	PGD	7.15	7.85	0.7	7.86	0.01	0	0	UP	0
283	23329	SLC36A1	1.97	2.68	0.7	3.497	0.01	0.01	0	UP	0
284	20364	MITF	1.46	2.16	0.7	5.473	0	0.01	0	UP	0
285	29351	FAM214B	1.53	2.24	0.7	2.475	0.01	0.01	0	UP	0
286	19269	CRYBB1	0.84	1.53	0.69	2.824	0	0	0	UP	0
287	11243	PPP4C	6.38	7.07	0.69	7.667	0	0	0	UP	0
288	15781	LAIR2	2.14	2.83	0.69	2.576	0.01	0.01	0	UP	0
289	17491	NRP2	1.62	2.31	0.69	3.452	0.01	0.01	0	UP	0
290	26875	EEPD1	2.73	3.42	0.69	4.121	0.01	0	0	UP	0
291	22839	ZFYVE16	2.13	2.82	0.69	5.222	0	0.01	0	UP	0
292	18063	RIN2	0.45	1.15	0.69	2.654	0	0.01	0	UP	0
293	18022	KIF16B	1.98	2.68	0.69	6.767	0.01	0.01	0	UP	0
294	11054	DCUN1D3	1.78	2.47	0.69	2.721	0	0.01	0	UP	0
295	3378	C10orf54	4.15	4.83	0.68	17.2	0	0.01	0	UP	0
296	3733	HPS1	5.29	5.97	0.68	12.21	0	0	0	UP	0
297	28005	SLC4A2	4.73	5.42	0.68	8.524	0.01	0	0	UP	0
298	1800	ZBTB7B	4.31	4.99	0.68	7.799	0.01	0.01	0	UP	0
299	14447	ATG4D	3.76	4.44	0.68	3.107	0.01	0.01	0	UP	0
300	22885	ARRDC3	0.93	1.61	0.68	4.364	0	0	0	UP	0
301	18199	ASIP	0.23	0.91	0.68	2.28	0.01	0.01	0	UP	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
302	16028	GREB1	1.76	2.44	0.68	6.281	0	0.01	0	UP	0
303	15513	SNORD35B	2.9	3.58	0.68	1.154	0	0.01	0	UP	UP
304	30307	SNHG7	5.08	5.75	0.67	2.959	0	0.01	0	UP	0
305	2043	FCGR2B	2.63	3.3	0.67	2.372	0	0	0	UP	0
306	15943	UBE2M	6.36	7.03	0.67	15.43	0	0	0	UP	0
307	9983	CSK	7.1	7.77	0.67	14.24	0.01	0.01	0	UP	0
308	19747	BHLHE40	4.85	5.52	0.67	10	0.01	0	0	UP	0
309	29598	PSAT1	6.11	6.78	0.67	6.264	0.01	0.01	0	UP	UP
310	14872	PLEKHF1	3.06	3.74	0.67	3.107	0.01	0.01	0	UP	0
311	1272	SARS	5.33	6	0.67	6.756	0	0.01	0	UP	0
312	23590	HEIH	3.65	4.33	0.67	5.892	0	0	0	UP	0
313	11781	FOXF1	2.74	3.41	0.67	3.235	0.01	0	0	UP	0
314	17175	CYTIP	2.48	3.15	0.67	4.307	0.01	0	0	UP	0
315	20854	TM4SF1	0.59	1.27	0.67	1.823	0.01	0.01	0	UP	0
316	17604	CYP27A1	0.06	0.73	0.67	3.534	0	0.01	0	UP	0
317	1327	ADORA3	0.92	1.59	0.67	4.481	0	0.01	0	UP	0
318	19713	TYMP	3.21	3.88	0.66	16.64	0.01	0.01	0	UP	0
319	11155	AQP8	0.33	0.98	0.66	2.689	0	0	0	UP	0
320	3806	C10orf95	0.42	1.07	0.66	1.438	0	0.01	0	UP	0
321	19420	CYTH4	2.35	3.02	0.66	5.971	0	0.01	0	UP	0
322	7302	IL17D	2.24	2.9	0.66	3.267	0.01	0.01	0	UP	0
323	23570	SQSTM1	5.81	6.47	0.66	8.741	0	0.01	0	UP	0
324	27275	SEMA3C	0.27	0.92	0.66	4.195	0	0	0	UP	0
325	10795	CEMP1	1.97	2.63	0.66	1.897	0	0	0	UP	0
326	16186	ALK	0	0.66	0.66	3.678	0	0	0	UP	0
327	21228	MFI2	3.13	3.78	0.65	6.601	0	0.01	0	UP	0
328	14905	PEPD	5.12	5.77	0.65	7.587	0	0	0	UP	0
329	655	STK40	3.85	4.5	0.65	6.678	0	0	0	UP	0
330	1630	ECM1	4.14	4.79	0.65	5.243	0.01	0	0	UP	0
331	7732	FARP1	2.16	2.81	0.65	7.64	0.01	0	0	UP	UP
332	20544	ATP6V1A	4.52	5.17	0.65	7.291	0	0	0	UP	UP
333	8631	MOAP1	3.58	4.24	0.65	4.135	0	0.01	0	UP	0
334	20077	CCRL2	1.59	2.25	0.65	1.623	0.01	0.01	0	UP	0
335	1973	CD244	3.41	4.06	0.65	13.59	0.01	0.01	0	UP	0
336	19691	CRELD2	4.22	4.86	0.64	8.909	0	0	0	UP	0
337	5041	FLRT1	1.29	1.92	0.64	2.706	0	0.01	0	UP	0
338	19317	OSM	0.4	1.04	0.64	2.512	0.01	0.01	0	UP	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
339	3379	PSAP	6.94	7.58	0.64	7.384	0.01	0	0	UP	UP
340	1638	CTSS	4.24	4.88	0.64	17.75	0	0	0	UP	UP
341	24774	SLC17A5	4.13	4.76	0.64	6.293	0	0	0	UP	UP
342	24461	PPARD	5.14	5.77	0.64	7.648	0.01	0.01	0	UP	0
343	1367	OLFML3	0.53	1.17	0.64	3.973	0.01	0	0	UP	0
344	14149	NDUFS7	6.12	6.76	0.63	11.07	0.01	0.01	0	UP	0
345	19203	CHCHD10	6.69	7.33	0.63	6.141	0	0	0	UP	0
346	14291	LONP1	6.87	7.51	0.63	12.06	0	0.01	0	UP	0
347	15256	PLAUR	4.58	5.21	0.63	4.764	0.01	0	0	UP	0
348	18188	NECAB3	2.66	3.3	0.63	9.118	0	0	0	UP	0
349	4273	SMPD1	3.56	4.19	0.63	6.139	0.01	0.01	0	UP	0
350	12758	RARA	3.86	4.49	0.63	4.363	0.01	0.01	0	UP	0
351	15767	MBOAT7	5.64	6.27	0.63	7.834	0	0.01	0	UP	0
352	10722	TPSD1	0.76	1.39	0.63	1.477	0.01	0	0	UP	0
353	24445	C6orf1	3.8	4.43	0.63	3.505	0.01	0	0	UP	0
354	13075	ITGA3	1.93	2.56	0.63	3.814	0	0	0	UP	0
355	8364	ATP6V1D	4.39	5.03	0.63	3.378	0	0.01	0	UP	0
356	7559	DLEU7	1.61	2.23	0.62	1.632	0.01	0	0	UP	0
357	14368	TIMM44	5.37	5.99	0.62	12.9	0	0.01	0	UP	0
358	15851	ZNF787	4.79	5.41	0.62	6.219	0.01	0	0	UP	0
359	15379	NPAS1	2.94	3.56	0.62	4.084	0	0	0	UP	UP
360	651	MAP7D1	5.59	6.21	0.62	8.669	0.01	0	0	UP	0
361	15613	SIGLEC17P	3.42	4.04	0.62	5.599	0.01	0.01	0	UP	UP
362	26616	TTYH3	5.89	6.52	0.62	11.91	0.01	0	0	UP	0
363	31635	FAM50A	5.92	6.54	0.62	11.87	0	0	0	UP	0
364	26948	OGDH	4.94	5.56	0.62	24.81	0	0	0	UP	0
365	31041	LINC00891	1.01	1.63	0.62	2.065	0.01	0.01	0	UP	0
366	18910	CSTB	7.01	7.63	0.62	7.269	0.01	0	0	UP	0
367	12185	GAS7	5.2	5.81	0.62	25.96	0.01	0.01	0	UP	0
368	11502	SLC38A7	2.25	2.87	0.62	5.334	0.01	0.01	0	UP	UP
369	22960	STARD4	3.13	3.75	0.62	3.497	0.01	0.01	0	UP	UP
370	8262	LGALS3	4.59	5.22	0.62	2.785	0	0.01	0	UP	0
371	20290	SPATA12	1.22	1.84	0.62	1.362	0	0	0	UP	0
372	13475	SOCS3	0.4	1.02	0.62	4.056	0.01	0	0	UP	0
373	21193	SDHAP2	2.46	3.08	0.62	2.253	0	0	0	UP	0
374	4990	B3GAT3	4.06	4.67	0.61	4.624	0	0.01	UP	UP	UP
375	30342	DPP7	6.29	6.9	0.61	11.26	0.01	0	0	UP	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
376	31615	IRAK1	7.47	8.08	0.61	10	0.01	0.01	0	UP	0
377	8895	GPR132	2.51	3.11	0.61	3.372	0	0	0	UP	0
378	14694	MRPL34	5.82	6.43	0.61	6.863	0	0.01	0	UP	0
379	12654	MYO19	4.12	4.73	0.61	4.707	0.01	0.01	0	UP	0
380	15433	GRIN2D	2.11	2.71	0.61	1.895	0.01	0.01	0	UP	0
381	9373	VPS18	4.03	4.64	0.61	6.146	0	0	0	UP	0
382	281	PLEKHM2	4.73	5.34	0.61	15.71	0.01	0	0	UP	0
383	14435	ICAM1	3.84	4.45	0.61	6.252	0.01	0.01	0	UP	0
384	19867	COLQ	3.1	3.71	0.61	3.844	0.01	0.01	0	UP	0
385	31653	MPP1	5.78	6.38	0.61	8.697	0.01	0	0	UP	0
386	11667	HP	1.16	1.76	0.6	2.12	0	0.01	UP	UP	UP
387	20921	PTX3	1.7	2.3	0.6	3.177	0	0.01	0	UP	UP
388	14534	JUNB	4.66	5.26	0.6	3.305	0	0	0	UP	0
389	19710	LMF2	4.35	4.95	0.6	5.75	0.01	0	0	UP	0
390	11810	MVD	3.84	4.44	0.6	5.728	0.01	0	0	UP	0
391	26954	MYO1G	6.41	7.01	0.6	8.946	0.01	0.01	0	UP	DN
392	9365	RMDN3	3.72	4.33	0.6	3.918	0	0	0	UP	0
393	17875	TRIB3	5.62	6.22	0.6	8.395	0.01	0.01	0	UP	0
394	24194	C6orf47	2.89	3.49	0.6	5.071	0	0	0	UP	0
395	27232	POR	4.4	5	0.6	8.049	0	0	0	UP	0
396	13449	MFSD11	2.05	2.64	0.6	3.5	0.01	0.01	0	UP	0
397	7061	PLBD2	3.66	4.26	0.6	2.831	0	0	0	UP	0
398	27698	STRIP2	3.15	3.76	0.6	5.638	0	0	0	UP	UP
399	19295	RHBDD3	2.77	3.35	0.59	2.888	0	0	0	UP	0
400	22786	HEXB	6.84	7.43	0.59	5.002	0	0	0	UP	0
401	5228	TCIRG1	4.9	5.49	0.59	2.07	0.01	0.01	0	UP	0
402	8488	IRF2BPL	2.66	3.25	0.59	9.032	0.01	0	0	UP	0
403	15762	TFPT	4.31	4.89	0.59	17.61	0	0	0	UP	0
404	13902	SIGLEC15	1.23	1.82	0.59	3.451	0	0.01	0	UP	0
405	19478	GGA1	4.24	4.83	0.59	2.652	0.01	0.01	0	UP	0
406	30580	AP1S2	5.4	6	0.59	6.154	0	0	0	UP	0
407	31166	GLA	6	6.59	0.59	5.708	0.01	0.01	0	UP	0
408	1861	AF086351	4.61	5.2	0.59	5.529	0	0.01	0	UP	0
409	12235	TTC19	4.32	4.91	0.59	17.76	0	0	0	UP	0
410	14607	ILVBL	4.43	5.01	0.58	4.74	0	0.01	0	UP	UP
411	5460	SMCO4	3.41	3.99	0.58	1.229	0	0.01	0	UP	0
412	28725	CCNE2	3.74	4.31	0.58	1.639	0.01	0	0	UP	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
413	4716	PEX16	3.37	3.95	0.58	4.36	0	0.01	0	UP	0
414	22808	ZBED3	2.57	3.15	0.58	3.337	0	0.01	0	UP	UP
415	3005	BC078172	1.13	1.71	0.58	1.358	0.01	0	0	UP	0
416	8473	BATF	4.97	5.55	0.58	7.254	0.01	0	0	UP	0
417	16493	DYSF	3.16	3.73	0.58	7.477	0	0.01	0	UP	0
418	19536	ATF4	7.7	8.28	0.58	14.85	0	0	0	UP	0
419	27432	PILRA	2.31	2.9	0.58	2.781	0	0.01	0	UP	0
420	27586	GPR85	1.5	2.09	0.58	2.706	0	0	0	UP	0
421	18656	SAMSN1	2.33	2.91	0.58	3.751	0.01	0	0	UP	DN
422	15824	UBE2S	7.25	7.81	0.57	17.16	0.01	0.01	0	UP	0
423	19161	SDF2L1	4.75	5.33	0.57	4.116	0	0.01	0	UP	UP
424	6378	TUBA1C	7.99	8.56	0.57	4.534	0	0.01	0	UP	0
425	3714	UBTD1	3.43	4	0.57	3.054	0	0.01	0	UP	0
426	9890	CLN6	6.23	6.8	0.57	5.991	0.01	0	0	UP	0
427	26608	SNX8	3.8	4.37	0.57	11.97	0	0.01	0	UP	0
428	11177	CLN3	4.73	5.3	0.57	12.15	0	0.01	0	UP	0
429	28876	WDYHV1	3.04	3.6	0.57	2.37	0	0.01	0	UP	0
430	15793	NLRP7	1.48	2.05	0.57	8.476	0	0.01	0	UP	UP
431	15835	ZNF524	3.6	4.17	0.57	2.226	0.01	0.01	0	UP	0
432	14468	LDLR	3.87	4.44	0.57	6.81	0.01	0.01	0	UP	0
433	17859	NEU4	0.25	0.82	0.57	2.207	0.01	0	0	UP	0
434	19566	ACO2	5.61	6.18	0.57	8.24	0	0	0	UP	0
435	22187	FAM198B	0.38	0.96	0.57	4.896	0	0.01	0	UP	0
436	9338	THBS1	0.3	0.87	0.57	3.938	0.01	0.01	0	UP	0
437	14196	GADD45B	4.34	4.91	0.57	5.761	0	0	0	UP	0
438	2772	KMO	0.24	0.81	0.57	3.058	0.01	0.01	0	UP	0
439	27469	VGF	0.74	1.31	0.57	2.277	0	0	0	UP	0
440	27579	DOCK4	0.44	1.01	0.57	4.928	0.01	0.01	0	UP	0
441	3433	ZSWIM8	2.77	3.34	0.57	2.045	0	0	0	UP	0
442	1029	CTH	3	3.57	0.57	2.775	0	0	0	UP	0
443	18781	OLIG1	3.48	4.05	0.57	4.299	0.01	0.01	0	UP	0
444	18443	SNAI1	1.94	2.5	0.56	3.767	0.01	0	UP	UP	0
445	2491	CR1	1.25	1.8	0.56	3.209	0	0	0	UP	0
446	943	C8B	0.5	1.06	0.56	3.251	0	0.01	0	UP	UP
447	29050	CYC1	7.27	7.83	0.56	14.13	0	0.01	0	UP	0
448	17260	GAD1	1.44	2	0.56	1.44	0	0	0	UP	0
449	487	DHDDS	3.78	4.35	0.56	9.241	0	0	0	UP	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
450	8095	GZMB	0	0.56	0.56	5.645	0	0	0	UP	0
451	15610	SIGLEC9	1.6	2.15	0.56	1.207	0	0.01	0	UP	0
452	6233	BHLHE41	1.73	2.29	0.56	4.339	0.01	0.01	0	UP	0
453	7385	LINC00426	2.47	3.04	0.56	3.803	0.01	0	0	UP	0
454	871	TTC39A	0.37	0.93	0.56	1.563	0.01	0.01	0	UP	0
455	5424	FZD4	0.66	1.22	0.56	3.63	0.01	0.01	0	UP	0
456	11819	CDT1	5.13	5.68	0.55	8.114	0	0.01	0	UP	0
457	9871	SNORD16	4.15	4.69	0.55	1.721	0.01	0	0	UP	0
458	10691	FAM195A	5.11	5.66	0.55	5.666	0.01	0.01	0	UP	UP
459	29068	SLC52A2	5.39	5.94	0.55	15.18	0.01	0.01	0	UP	0
460	2665	MRPL55	5.75	6.31	0.55	15.37	0	0	0	UP	0
461	13364	NAT9	2.89	3.44	0.55	1.915	0	0.01	0	UP	UP
462	15620	NKG7	7.66	8.21	0.55	16.3	0.01	0	0	UP	UP
463	59	GLTPD1	4.47	5.03	0.55	5.769	0	0.01	0	UP	0
464	22823	ARSB	3.02	3.57	0.55	2.972	0	0	0	UP	0
465	23589	MGAT1	5.27	5.83	0.55	10.78	0.01	0.01	0	UP	0
466	14179	AP3D1	5.65	6.21	0.55	17.17	0.01	0.01	0	UP	0
467	21731	PPBP	0.09	0.64	0.55	3.272	0	0	0	UP	0
468	8005	TCRDV2J2	0.27	0.81	0.55	2.511	0	0.01	0	UP	0
469	20439	CLDND1	4.95	5.5	0.55	6.096	0	0	0	UP	DN
470	22223	MSMO1	3.9	4.45	0.55	3.374	0.01	0	0	UP	UP
471	28419	ADAM9	5.17	5.72	0.55	7.119	0	0.01	0	UP	UP
472	28008	TMUB1	4.46	5	0.54	4.341	0.01	0.01	0	UP	0
473	14137	SBNO2	3.84	4.39	0.54	3.911	0	0	0	UP	0
474	31602	IDH3G	5.61	6.16	0.54	5.377	0	0.01	0	UP	0
475	12094	TNFSF12	2.59	3.13	0.54	2.445	0	0	0	UP	0
476	15377	AP2S1	7.29	7.83	0.54	5.387	0.01	0.01	0	UP	0
477	30576	CA5BP1	3.43	3.97	0.54	3.579	0	0	0	UP	0
478	12861	NAGLU	3.68	4.21	0.54	6.626	0	0	0	UP	UP
479	20673	MGLL	4.66	5.21	0.54	15.51	0	0	0	UP	0
480	15396	NAPA	6.09	6.63	0.54	22.07	0	0.01	0	UP	0
481	14683	F2RL3	1.94	2.49	0.54	1.943	0.01	0	0	UP	DN
482	24507	ZFAND3	4.97	5.51	0.54	10.74	0.01	0.01	0	UP	0
483	12894	VAT1	7.5	8.04	0.54	6.785	0.01	0.01	0	UP	0
484	2285	FAM129A	3.63	4.17	0.54	7.346	0	0.01	0	UP	0
485	573	COL16A1	0.42	0.95	0.54	3.822	0.01	0.01	0	UP	0
486	23476	CPEB4	1.51	2.05	0.54	4.815	0.01	0.01	0	UP	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
487	14326	C3	0.78	1.32	0.54	3.458	0	0	0	UP	0
488	25292	AGPAT4	2.49	3.03	0.54	1.852	0	0	0	UP	0
489	17177	ACVR1	2.29	2.82	0.54	2.889	0	0.01	0	UP	0
490	29588	GCNT1	3.32	3.85	0.54	6.326	0	0.01	0	UP	0
491	795	SNORD38B	1.43	1.97	0.54	1.013	0	0.01	0	UP	0
492	14375	RPS28	9.69	10.22	0.53	12.8	0	0	0	UP	0
493	30362	TOR4A	3.6	4.14	0.53	4.259	0	0	0	UP	0
494	15532	AP2A1	5.5	6.04	0.53	11.37	0	0	0	UP	0
495	15836	ZNF865	2.77	3.31	0.53	3.795	0	0	0	UP	0
496	10693	RHOT2	4.99	5.52	0.53	4.356	0.01	0	0	UP	0
497	4127	TOLLIP	3.49	4.02	0.53	19.28	0	0	0	UP	0
498	24145	PPP1R18	5.22	5.75	0.53	11.94	0	0	0	UP	0
499	29045	GRINA	6.88	7.41	0.53	10.16	0.01	0.01	0	UP	0
500	23541	RMND5B	3.05	3.58	0.53	4.641	0.01	0.01	0	UP	0
501	12335	MAPK7	2	2.54	0.53	2.232	0	0.01	0	UP	0
502	2251	MR1	2.34	2.87	0.53	2.444	0	0	0	UP	0
503	27582	IFRD1	4.08	4.61	0.53	5.381	0	0.01	0	UP	0
504	4321	LMO1	3.26	3.79	0.52	3.184	0	0.01	0	UP	0
505	15833	ZNF579	3.27	3.79	0.52	5.167	0	0.01	0	UP	0
506	14169	KLF16	4.52	5.04	0.52	12.47	0.01	0	0	UP	0
507	15816	TMEM150B	0.74	1.27	0.52	1.214	0	0	0	UP	0
508	28399	BRF2	2.72	3.24	0.52	2.961	0	0	0	UP	0
509	18900	CBS	3.51	4.02	0.52	3.94	0.01	0.01	0	UP	0
510	30202	UCK1	3.27	3.79	0.52	5.613	0	0.01	0	UP	0
511	14240	EEF2	9.93	10.45	0.52	17.78	0	0.01	0	UP	0
512	14418	FBXL12	3.72	4.24	0.52	4.31	0.01	0.01	0	UP	0
513	15154	C19orf47	3.4	3.91	0.52	5.297	0	0	0	UP	0
514	17640	CHPF	4.01	4.54	0.52	16.91	0.01	0	0	UP	0
515	27182	LIMK1	4.14	4.66	0.52	6.609	0	0.01	0	UP	0
516	14681	NWD1	1.82	2.34	0.52	8.081	0.01	0.01	0	UP	0
517	21407	SLC2A9	2.94	3.46	0.52	5.936	0	0	0	UP	0
518	17206	FAP	4.07	4.6	0.52	4.106	0.01	0.01	0	UP	0
519	2420	SOX13	2.28	2.8	0.52	2.452	0.01	0	0	UP	0
520	6036	SLC2A3	3.14	3.67	0.52	6.195	0	0	0	UP	0
521	24610	C6orf223	2.14	2.66	0.52	3.845	0.01	0	0	UP	0
522	1841	RIT1	3.28	3.79	0.52	3.012	0	0	0	UP	0
523	569	LOC284551	0.94	1.46	0.52	1.78	0	0	0	UP	0

#	GeneID	Gene Symbol	U937.av.log2FPKM.Ctr	U937.av.log2FPKM.BRD0320	**U937.log2FC.BRD0320.vs.Ctr**	U937.SNR.BRD0320.vs.Ctr	U937.Pvalue.BRD0320.vs.Ctr	U937.FDR.BRD0320.vs.Ctr	U937.BRD0705.vs.Ctr	**U937.BRD0320.vs.Ctr**	U937.BRD3731.vs.Ctr
524	23018	SNX24	0.8	1.31	0.52	3.118	0	0	0	UP	0
525	803	UROD	5.71	6.21	0.51	6.22	0.01	0	0	UP	0
526	107	LOC115110	0.5	1	0.51	3.406	0	0	0	UP	UP
527	1820	GBA	4.73	5.24	0.51	5.304	0.01	0.01	0	UP	0
528	4731	ZNF408	2.27	2.78	0.51	6.18	0.01	0.01	0	UP	0
529	7747	GPR183	5.16	5.67	0.51	3.779	0	0.01	0	UP	DN
530	10827	TNFRSF12A	2.94	3.46	0.51	2.282	0.01	0.01	0	UP	0
531	11117	GGA2	5.58	6.1	0.51	12.51	0.01	0	0	UP	UP
532	12695	SRCIN1	1.54	2.05	0.51	2.104	0.01	0.01	0	UP	0
533	12969	PLEKHM1	2.61	3.12	0.51	3.115	0	0.01	0	UP	0
534	14589	GIPC1	3.81	4.32	0.51	4.214	0.01	0	0	UP	0
535	15375	SLC1A5	7.63	8.14	0.51	26.03	0.01	0.01	0	UP	0
536	15823	RPL28	9.14	9.65	0.51	7.536	0.01	0.01	0	UP	0
537	16886	PAX8	0.43	0.94	0.51	1.713	0	0.01	0	UP	0
538	16887	LOC654433	0.01	0.52	0.51	5.418	0.01	0	0	UP	0
539	17631	DNAJB2	2.45	2.96	0.51	4.278	0.01	0	0	UP	0
540	18803	KCNE1	0.68	1.19	0.51	12.89	0	0	0	UP	0
541	19609	PACSIN2	3.77	4.28	0.51	7.126	0	0	0	UP	0
542	21078	AP2M1	6.92	7.43	0.51	18.22	0.01	0	0	UP	0
543	23730	TMEM170B	2.44	2.96	0.51	5.906	0.01	0	0	UP	0
544	24721	RAB23	2.48	2.99	0.51	4.886	0.01	0.01	0	UP	0
545	27689	LOC100130705	1.15	1.66	0.51	1.302	0	0	0	UP	0
546	29942	SLC31A1	4.12	4.63	0.51	7.257	0	0.01	0	UP	UP
547	30365	NOXA1	1.66	2.17	0.51	2.035	0.01	0	0	UP	0
548	31612	TMEM187	2.41	2.93	0.51	3.051	0	0	0	UP	UP
549	686	RRAGC	4.77	5.28	0.5	4.185	0.01	0.01	0	UP	0
550	2634	ACBD3	4.47	4.97	0.5	6.773	0.01	0	0	UP	0
551	3121	NRP1	2.22	2.72	0.5	4.676	0	0	0	UP	0
552	11615	NQO1	4.27	4.77	0.5	2.81	0	0	0	UP	0
553	13571	FASN	6.31	6.81	0.5	2.522	0.01	0	0	UP	0
554	15791	FCAR	3.5	4	0.5	3.607	0	0.01	0	UP	DN
555	17880	SRXN1	4.07	4.58	0.5	7.63	0	0	0	UP	0
556	28982	SLC45A4	2.88	3.39	0.5	4.327	0	0.01	0	UP	0

Table S10. Top enriched gene sets from the functional groups predicted in BRD0705 vs DMSO enrichment map. Significance of the enrichment based on Fisher exact test.

Functional Category	Gene Set Name	Node Label	Trend BRD0705 vs DMSO	Enrichment Score	P-Value	FDR	Size GeneSet
Induced Differentiation	ADDYA_ERYTHROID_DIFFERENTIATION_BY_HEMIN	D1	GSK3Ai UP	1.130	5.73E-07	2.59E-04	73
	APPEL_IMATINIB_RESPONSE	D2	GSK3Ai UP	1.351	8.18E-07	3.25E-04	33
	DMAP_GMP_UP	D3	GSK3Ai UP	-0.742	1.85E-10	9.19E-07	686
	DMAP_HSC_eERY_DN*	D4	GSK3Ai UP	-1.101	3.70E-02	3.60E-01	573
	DMAP_MONO.vs.HSC_UP*	D5	GSK3Ai UP	1.047	6.90E-10	1.71E-06	499
	GERY_CEBP_TARGETS	D6	GSK3Ai UP	1.140	8.54E-06	2.12E-03	126
	KRIGE_RESPONSE_TO_TOSEDOSTAT_24HR_UP	D7	GSK3Ai UP	-1.320	4.84E-05	6.67E-03	783
	KRIGE_RESPONSE_TO_TOSEDOSTAT_6HR_UP	D8	GSK3Ai UP	-1.156	2.15E-04	1.72E-02	953
	MARTENS_TRETINOIN_RESPONSE_UP	D9	GSK3Ai UP	0.794	3.98E-02	3.69E-01	857
Mitochondrial Metabolism Activation	REACTOME_RESPIRATORY_ELECTRON_TRANSPORT_ATP_SYNTHESIS_BY_CHEMIOSM OTIC_COUPLING_AND_HEAT_PRODUCTION_BY_UNCOUPLING_PROTEINS	M1	GSK3Ai UP	2.323	0.00E+00	2.17E-04	77
	REACTOME_RESPIRATORY_ELECTRON_TRANSPORT	M2	GSK3Ai UP	2.283	0.00E+00	2.55E-04	64
	REACTOME_TCA_CYCLE_AND_RESPIRATORY_ELECTRON_TRANSPORT	M3	GSK3Ai UP	2.044	0.00E+00	4.26E-03	111
	MOOTHA_TCA	M4	GSK3Ai UP	1.914	0.00E+00	1.27E-02	16
	MOOTHA_HUMAN_MITODB_6_2002	M5	GSK3Ai UP	1.648	0.00E+00	6.41E-02	391
	MOOTHA_MITOCHONDRIA	M6	GSK3Ai UP	1.534	0.00E+00	1.06E-01	405
	WONG_MITOCHONDRIA_GENE_MODULE	M7	GSK3Ai UP	1.527	0.00E+00	1.08E-01	208
GSK3 Pathway Inhibition	WANG_RESPONSE_TO_GSK3_INHIBITOR_SB216763_DN	G1	GSK3A DN	-0.787	0.00E+00	1.14E-02	374
	CHIR_VS_CTL_GSE54056_DN	G2	GSK3A DN	-1.288	0.00E+00	2.95E-16	267
	WANG_RESPONSE_TO_GSK3_INHIBITOR_SB216763_UP	G3	GSK3Ai UP	-0.928	1.79E-03	5.86E-02	397
	STEGMAIER_GSK3A_KD_UP	G4	GSK3Ai UP	1.118	7.53E-04	3.93E-02	500
	STEGMAIER_GSK3A_GSK3B_KD_UP	G5	GSK3Ai UP	1.293	1.20E-05	2.59E-03	500
Loss of Stemness	TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_8D_DN	S1	GSK3Ai UP	1.403	8.80E-05	9.49E-03	205
	JAATINEN_HEMATOPOIETIC_STEM_CELL_DN	S2	GSK3Ai UP	1.473	1.55E-03	5.52E-02	226
	DANG_REGULATED_BY_MYC_DN	S3	GSK3Ai UP	1.416	2.01E-03	6.44E-02	243
	GAL_LEUKEMIC_STEM_CELL_DN	S4	GSK3Ai UP	1.363	2.04E-03	6.50E-02	244
	HOXA9_DN.V1_UP	S5	GSK3A DN	-1.680	4.26E-08	2.69E-06	194
	BENPORATH_SOX2_TARGETS	S6	GSK3A DN	-1.095	1.11E-05	9.57E-04	734
	IVANOVA_HEMATOPOIESIS_STEM_CELL_AND_PROGENITOR	S7	GSK3A DN	-1.118	5.53E-06	5.33E-04	681
	LIU_SOX4_TARGETS_UP	S8	GSK3A DN	-1.721	3.30E-06	3.76E-04	137
	SANSOM_APC_MYC_TARGETS	S9	GSK3A DN	-1.452	4.57E-04	2.20E-02	217
	TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_10D_UP	S10	GSK3A DN	-1.053	1.79E-06	2.35E-04	194
	ODONNELL_TARGETS_OF_MYC_AND_TFRC_UP	S11	GSK3A DN	-1.454	4.73E-06	4.66E-04	83

Table S11. Cytogenetics, molecular and clinical characteristics of patient samples used in this study.

n/a: data not available

# ID	Age	Sex	Diagnosis	Disease Status	FLT3	NPM1	Cytogenetics	molecular characteristics
1	11	M	AML	new	FLT3-ITD	n/a	46XY, add(6)(q21), add(9)(p24)	SETD2 D2438fs, DMD Y2111C
2	78	F	AML	new	FLT3-ITD	W288fs*>9	46 XX	ATM L439P, CEBPA Q305P, GATA1 V349M, TET2 G1861R
3	71	F	AML	new	WT	WT	46, XX, del(7)(q22q34), -18<add(21)(q22), +mar[18}	n/a
4	52	M	AML with erythroid dysplasia	new, prior MDS	WT	WT	complex karyotype	TP53 L194R
5	64	M	AML	prior MDS	WT	WT	46 XY	BCOR T1566fs*, DNMT3A R882H, KIT D816V, KRAS G13C, KRAS G13D, NRAS G13D, PTPN11 A72V, STAG2 M255fs*