

S19 Table: Alvocidib significantly affects the expression of the selected 163 genes as evident in the “LINCS L1000 Chem Pert down” category in Enrichr. The last number after the - is dose density.

Term	Overlap	P-value	Adjusted P-value
LINCS L1000 Chem Pert down			
LJP006 SKBR3 24H-alvocidib-0.12	18/111	$1.20 \times 10^{-18}$	$6.61 \times 10^{-15}$
LJP006 MCF10A 24H-alvocidib-3.33	12/92	$1.18 \times 10^{-11}$	$1.78 \times 10^{-9}$
LJP006 SKBR3 24H-alvocidib-0.37	12/92	$1.18 \times 10^{-11}$	$1.78 \times 10^{-9}$
LJP006 SKBR3 24H-alvocidib-10	12/95	$1.74 \times 10^{-11}$	$2.47 \times 10^{-9}$
LJP006 BT20 24H-alvocidib-0.12	13/134	$7.29 \times 10^{-11}$	$8.13 \times 10^{-9}$
LJP006 HME1 3H-alvocidib-1.11	14/166	$8.78 \times 10^{-11}$	$9.35 \times 10^{-9}$
LJP006 MCF10A 24H-alvocidib-0.12	11/89	$1.58 \times 10^{-10}$	$1.52 \times 10^{-8}$
LJP006 SKBR3 24H-alvocidib-3.33	12/115	$1.71 \times 10^{-10}$	$1.61 \times 10^{-8}$
LJP006 HME1 3H-alvocidib-3.33	14/194	$6.96 \times 10^{-10}$	$5.20 \times 10^{-8}$
LJP006 MCF10A 3H-alvocidib-0.37	12/143	$2.16 \times 10^{-9}$	$1.33 \times 10^{-7}$
LJP006 HCC515 24H-alvocidib-10	11/118	$3.39 \times 10^{-9}$	$1.94 \times 10^{-7}$
LJP006 HME1 3H-alvocidib-0.37	13/194	$7.11 \times 10^{-9}$	$3.61 \times 10^{-7}$
LJP006 HS578T 3H-alvocidib-10	11/143	$2.57 \times 10^{-8}$	$1.04 \times 10^{-6}$
LJP006 HA1E 24H-alvocidib-0.04	12/188	$4.72 \times 10^{-8}$	$1.78 \times 10^{-6}$
LJP006 SKBR3 24H-alvocidib-1.11	9/93	$6.81 \times 10^{-8}$	$2.41 \times 10^{-6}$
LJP006 LNCAP 3H-alvocidib-10	10/131	$1.21 \times 10^{-7}$	$3.94 \times 10^{-6}$
LJP006 SKBR3 3H-alvocidib-1.11	9/104	$1.80 \times 10^{-7}$	$5.53 \times 10^{-6}$
LJP006 MCF10A 3H-alvocidib-10	10/146	$3.35 \times 10^{-7}$	$9.25 \times 10^{-6}$
LJP006 MCF7 24H-alvocidib-3.33	6/35	$3.57 \times 10^{-7}$	$9.71 \times 10^{-6}$
LJP006 HME1 3H-alvocidib-10	9/114	$3.97 \times 10^{-7}$	$1.06 \times 10^{-5}$
LJP006 BT20 24H-alvocidib-3.33	9/115	$4.27 \times 10^{-7}$	$1.13 \times 10^{-5}$
LJP006 SKBR3 3H-alvocidib-0.37	8/86	$5.07 \times 10^{-7}$	$1.29 \times 10^{-5}$
LJP006 A549 24H-alvocidib-10	8/94	$1.01 \times 10^{-6}$	$2.33 \times 10^{-5}$
LJP006 BT20 24H-alvocidib-10	8/94	$1.01 \times 10^{-6}$	$2.32 \times 10^{-5}$
LJP006 SKBR3 3H-alvocidib-10	8/97	$1.28 \times 10^{-6}$	$2.85 \times 10^{-5}$
LJP006 HME1 24H-alvocidib-0.12	8/99	$1.50 \times 10^{-6}$	$3.23 \times 10^{-5}$
LJP006 LNCAP 24H-alvocidib-10	8/101	$1.74 \times 10^{-6}$	$3.68 \times 10^{-5}$
LJP006 MCF10A 24H-alvocidib-10	7/71	$1.80 \times 10^{-6}$	$3.77 \times 10^{-5}$
LJP006 HA1E 24H-alvocidib-10	7/72	$1.98 \times 10^{-6}$	$4.09 \times 10^{-5}$
LJP006 MCF7 3H-alvocidib-1.11	7/74	$2.39 \times 10^{-6}$	$4.78 \times 10^{-5}$
LJP006 HME1 3H-alvocidib-0.12	9/146	$3.17 \times 10^{-6}$	$6.04 \times 10^{-5}$
LJP006 MDAMB231 24H-alvocidib-1.11	7/82	$4.78 \times 10^{-6}$	$8.68 \times 10^{-5}$
LJP006 MCF7 24H-alvocidib-0.37	5/31	$4.84 \times 10^{-6}$	$8.76 \times 10^{-5}$
LJP006 LNCAP 24H-alvocidib-1.11	8/116	$4.94 \times 10^{-6}$	$8.92 \times 10^{-5}$
LJP006 HA1E 24H-alvocidib-0.12	7/83	$5.18 \times 10^{-6}$	$9.29 \times 10^{-5}$
LJP006 HS578T 24H-alvocidib-3.33	7/83	$5.18 \times 10^{-6}$	$9.28 \times 10^{-5}$
LJP006 MCF10A 3H-alvocidib-0.12	8/120	$6.35 \times 10^{-6}$	$1.10 \times 10^{-4}$
LJP006 MCF10A 3H-alvocidib-1.11	8/122	$7.18 \times 10^{-6}$	$1.22 \times 10^{-4}$
LJP006 LNCAP 24H-alvocidib-3.33	6/58	$7.62 \times 10^{-6}$	$1.29 \times 10^{-4}$
LJP006 HA1E 24H-alvocidib-0.37	7/89	$8.26 \times 10^{-6}$	$1.37 \times 10^{-4}$
LJP006 MDAMB231 24H-alvocidib-10	6/61	$1.02 \times 10^{-5}$	$1.65 \times 10^{-4}$
LJP006 SKBR3 24H-alvocidib-0.04	7/99	$1.67 \times 10^{-5}$	$2.49 \times 10^{-4}$
LJP006 HT29 24H-alvocidib-10	6/67	$1.77 \times 10^{-5}$	$2.61 \times 10^{-4}$
LJP006 HME1 24H-alvocidib-0.37	7/103	$2.16 \times 10^{-5}$	$3.12 \times 10^{-4}$
LJP006 HS578T 3H-alvocidib-1.11	7/105	$2.45 \times 10^{-5}$	$3.49 \times 10^{-4}$
LJP006 HEPG2 24H-alvocidib-10	6/75	$3.38 \times 10^{-5}$	$4.58 \times 10^{-4}$
LJP006 LNCAP 3H-alvocidib-0.37	7/111	$3.50 \times 10^{-5}$	$4.73 \times 10^{-4}$
LJP006 LNCAP 24H-alvocidib-0.12	7/112	$3.71 \times 10^{-5}$	$4.94 \times 10^{-4}$
LJP006 MDAMB231 3H-alvocidib-3.33	7/114	$4.16 \times 10^{-5}$	$5.44 \times 10^{-4}$
LJP006 HS578T 3H-alvocidib-0.12	8/156	$4.28 \times 10^{-5}$	$5.56 \times 10^{-4}$
LJP006 MDAMB231 3H-alvocidib-0.12	8/156	$4.28 \times 10^{-5}$	$5.56 \times 10^{-4}$
LJP006 MDAMB231 3H-alvocidib-0.37	7/120	$5.77 \times 10^{-5}$	$7.17 \times 10^{-4}$
LJP006 MCF10A 3H-alvocidib-0.04	7/123	$6.75 \times 10^{-5}$	$8.16 \times 10^{-4}$
LJP006 BT20 24H-alvocidib-0.37	7/124	$7.11 \times 10^{-5}$	$8.51 \times 10^{-4}$

S19 Table: (Continued)

LJP006 HA1E 24H- Alvocidib-3.33	6/86	$7.33 \times 10^{-5}$	$8.75 \times 10^{-4}$
LJP006 MCF7 3H- Alvocidib-3.33	7/125	$7.48 \times 10^{-5}$	$8.86 \times 10^{-4}$
LJP006 HS578T 24H- Alvocidib-0.37	6/89	$8.89 \times 10^{-5}$	$1.02 \times 10^{-3}$
LJP006 MCF7 24H- Alvocidib-10	5/57	$1.01 \times 10^{-4}$	$1.13 \times 10^{-3}$
LJP006 HS578T 24H- Alvocidib-1.11	6/91	$1.01 \times 10^{-4}$	$1.12 \times 10^{-3}$
LJP006 MCF7 3H- Alvocidib-10	7/132	$1.05 \times 10^{-4}$	$1.18 \times 10^{-3}$
LJP006 BT20 3H- Alvocidib-0.37	5/62	$1.50 \times 10^{-4}$	$1.59 \times 10^{-3}$
LJP006 LNCAP 24H- Alvocidib-0.37	7/140	$1.52 \times 10^{-4}$	$1.60 \times 10^{-3}$
LJP006 MCF10A 3H- Alvocidib-3.33	7/143	$1.74 \times 10^{-4}$	$1.79 \times 10^{-3}$
LJP006 HS578T 3H- Alvocidib-3.33	7/148	$2.14 \times 10^{-4}$	$2.15 \times 10^{-3}$
LJP006 MDAMB231 3H- Alvocidib-1.11	7/149	$2.23 \times 10^{-4}$	$2.23 \times 10^{-3}$
LJP006 MCF7 3H- Alvocidib-0.37	6/108	$2.58 \times 10^{-4}$	$2.51 \times 10^{-3}$
LJP006 LNCAP 3H- Alvocidib-1.11	6/112	$3.14 \times 10^{-4}$	$2.96 \times 10^{-3}$
LJP006 BT20 24H- Alvocidib-0.04	5/73	$3.25 \times 10^{-4}$	$3.06 \times 10^{-3}$
LJP006 SKBR3 3H- Alvocidib-0.12	6/113	$3.29 \times 10^{-4}$	$3.08 \times 10^{-3}$
LJP006 MCF7 3H- Alvocidib-0.12	6/121	$4.75 \times 10^{-4}$	$4.18 \times 10^{-3}$
LJP006 MDAMB231 24H- Alvocidib-3.33	5/82	$5.56 \times 10^{-4}$	$4.77 \times 10^{-3}$
LJP006 HME1 24H- Alvocidib-3.33	5/83	$5.88 \times 10^{-4}$	$4.99 \times 10^{-3}$
LJP006 LNCAP 3H- Alvocidib-0.12	6/127	$6.13 \times 10^{-4}$	$5.19 \times 10^{-3}$
LJP006 MDAMB231 3H- Alvocidib-0.04	5/87	$7.29 \times 10^{-4}$	$6.01 \times 10^{-3}$
LJP006 LNCAP 24H- Alvocidib-0.04	8/238	$7.64 \times 10^{-4}$	$6.24 \times 10^{-3}$
LJP006 HS578T 24H- Alvocidib-0.04	4/51	$7.89 \times 10^{-4}$	$6.40 \times 10^{-3}$
LJP006 HS578T 24H- Alvocidib-0.12	5/89	$8.09 \times 10^{-4}$	$6.54 \times 10^{-3}$
LJP006 MDAMB231 3H- Alvocidib-10	6/139	$9.84 \times 10^{-4}$	$7.70 \times 10^{-3}$
LJP006 HS578T 3H- Alvocidib-0.37	6/141	$1.06 \times 10^{-3}$	$8.19 \times 10^{-3}$
LJP006 BT20 24H- Alvocidib-1.11	5/95	$1.09 \times 10^{-3}$	$8.35 \times 10^{-3}$
LJP006 HME1 3H- Alvocidib-0.04	6/142	$1.10 \times 10^{-3}$	$8.44 \times 10^{-3}$
LJP006 SKBR3 3H- Alvocidib-0.04	4/59	$1.37 \times 10^{-3}$	$1.01 \times 10^{-2}$
LJP006 HME1 24H- Alvocidib-0.04	5/108	$1.92 \times 10^{-3}$	$1.35 \times 10^{-2}$
LJP006 A375 24H- Alvocidib-10	5/109	$2.00 \times 10^{-3}$	$1.39 \times 10^{-2}$
LJP006 BT20 3H- Alvocidib-10	3/40	$4.21 \times 10^{-3}$	$2.55 \times 10^{-2}$
LJP006 HS578T 24H- Alvocidib-10	4/86	$5.38 \times 10^{-3}$	$3.10 \times 10^{-2}$
LJP006 HME1 24H- Alvocidib-1.11	4/88	$5.83 \times 10^{-3}$	$3.31 \times 10^{-2}$
LJP006 HA1E 24H- Alvocidib-1.11	4/89	$6.07 \times 10^{-3}$	$3.40 \times 10^{-2}$
LJP006 MDAMB231 24H- Alvocidib-0.37	4/92	$6.82 \times 10^{-3}$	$3.73 \times 10^{-2}$
LJP006 MDAMB231 24H- Alvocidib-0.04	3/48	$7.03 \times 10^{-3}$	$3.82 \times 10^{-2}$
LJP006 MCF7 24H- Alvocidib-0.12	2/17	$8.29 \times 10^{-3}$	$4.36 \times 10^{-2}$
LJP006 HS578T 3H- Alvocidib-0.04	4/99	$8.79 \times 10^{-3}$	$4.55 \times 10^{-2}$
LJP006 LNCAP 3H- Alvocidib-3.33	5/155	$8.87 \times 10^{-3}$	$4.59 \times 10^{-2}$
LJP006 BT20 3H- Alvocidib-0.12	3/53	$9.24 \times 10^{-3}$	$4.75 \times 10^{-2}$