

Table S2: Significant DEGs with a $|\log_2(\text{fold change})|$ of ≥ 1 after ATRA+PDT compared to PDT.

gene	locus	sample_1	sample_2	value_1	value_2	log2(fold_change)	p_value	q_value
Up-regulated genes								
FAM131B	chr7:143050492-143059840	PDT	ATRA+PDT	0.409476	3.47658	3.08582	0.00005	0.00102476
RARRES1	chr3:158414896-158450275	PDT	ATRA+PDT	2.68665	16.1452	2.58723	0.00005	0.00102476
MDK	chr11:46402617-46405375	PDT	ATRA+PDT	4.9587	26.8511	2.43695	0.00005	0.00102476
CYP24A1	chr20:52769987-52790516	PDT	ATRA+PDT	0.491874	2.60664	2.40583	0.00005	0.00102476
PSMB8	chr6_ssto_hap7:4239266-4252521	PDT	ATRA+PDT	1.01457	4.79809	2.24159	0.00005	0.00102476
RARRES3	chr11:63014620-63330855	PDT	ATRA+PDT	7.65704	32.1209	2.06866	0.00005	0.00102476
REN	chr1:204123943-204135465	PDT	ATRA+PDT	0.636161	2.66058	2.06428	0.00005	0.00102476
CTSS	chr1:150702671-150738433	PDT	ATRA+PDT	0.43546	1.76088	2.01569	0.00005	0.00102476
FGF19	chr11:69513005-69519106	PDT	ATRA+PDT	6.27328	25.0306	1.9964	0.00005	0.00102476
TXK	chr4:48068409-48136273	PDT	ATRA+PDT	0.361822	1.3053	1.85103	0.00005	0.00102476
SERPINA3	chr14:95078713-95090390	PDT	ATRA+PDT	0.68675	2.43736	1.82746	0.0001	0.00194145
ALDH1L1	chr3:125822407-125899485	PDT	ATRA+PDT	0.337508	1.1976	1.82715	0.00005	0.00102476
IGFBP6	chr12:53491435-53496128	PDT	ATRA+PDT	31.6079	110.977	1.81191	0.00005	0.00102476
CHST4	chr16:71560022-71572493	PDT	ATRA+PDT	0.355725	1.21076	1.76709	0.00015	0.00281494
TAPBPL	chr12:6561176-6579843	PDT	ATRA+PDT	0.508899	1.72817	1.7638	0.00035	0.00584867
LCN2	chr9:130911731-130915734	PDT	ATRA+PDT	67.9208	229.774	1.75829	0.00005	0.00102476
PARP10	chr8:145051319-145060635	PDT	ATRA+PDT	0.401217	1.33341	1.73267	0.00005	0.00102476
TRIM31	chr6_ssto_hap7:1401126-1411311	PDT	ATRA+PDT	23.1248	76.6326	1.72852	0.00005	0.00102476
AKAP12	chr6:151561133-151679694	PDT	ATRA+PDT	5.55638	17.5063	1.65566	0.00005	0.00102476
MTSS1	chr8:125563027-125740730	PDT	ATRA+PDT	1.69547	5.32383	1.65078	0.00005	0.00102476
DHRS3	chr1:12627938-12677820	PDT	ATRA+PDT	7.01205	21.5381	1.61899	0.00005	0.00102476
IFITM3	chr11:319672-320914	PDT	ATRA+PDT	3.17628	9.52404	1.58423	0.00005	0.00102476
WFDC2	chr20:44098393-44110172	PDT	ATRA+PDT	2.28187	6.53873	1.51879	0.0021	0.0238805
SAMD9	chr7:92728825-92747336	PDT	ATRA+PDT	8.37085	23.382	1.48196	0.00005	0.00102476
LOXL4	chr10:100007442-100028007	PDT	ATRA+PDT	1.62446	4.43023	1.44742	0.00005	0.00102476
IL15RA	chr10:5994333-6020150	PDT	ATRA+PDT	1.29552	3.53252	1.44716	0.00005	0.00102476
CNGA1	chr4:47937993-48014961	PDT	ATRA+PDT	0.664166	1.77801	1.42065	0.00005	0.00102476
STRA6	chr15:74471807-74502046	PDT	ATRA+PDT	0.553158	1.47588	1.41581	0.00005	0.00102476
SERPINA5	chr14:95047730-95059457	PDT	ATRA+PDT	0.689563	1.79855	1.38308	0.00005	0.00102476
VAMP5	chr2:85811530-85820511	PDT	ATRA+PDT	3.04146	7.92904	1.38238	0.00005	0.00102476
C10orf54	chr10:73156690-73575704	PDT	ATRA+PDT	1.13266	2.95064	1.38132	0.00005	0.00102476
GABRP	chr5:170210722-170241050	PDT	ATRA+PDT	1.85944	4.52118	1.28183	0.00005	0.00102476
C10orf10	chr10:45455218-45490172	PDT	ATRA+PDT	3.78595	9.13062	1.27006	0.00005	0.00102476
ITPKA	chr15:41786055-41795757	PDT	ATRA+PDT	0.556708	1.31432	1.23932	0.00425	0.0420979
BTN3A1	chr6:26402464-26415444	PDT	ATRA+PDT	0.773794	1.7837	1.20485	0.00005	0.00102476
PLAC8	chr4:84011210-84035911	PDT	ATRA+PDT	2.40008	5.49895	1.19608	0.00005	0.00102476
ATF3	chr1:212738675-212794119	PDT	ATRA+PDT	97.0536	219.94	1.18025	0.00005	0.00102476
HDAC9	chr7:18126571-19036992	PDT	ATRA+PDT	1.44155	3.20797	1.15404	0.00005	0.00102476
LGALS9	chr17:25958173-25976586	PDT	ATRA+PDT	8.81966	19.451	1.14105	0.00005	0.00102476
SLC2A12	chr6:134308718-134373789	PDT	ATRA+PDT	0.608026	1.3385	1.13841	0.00005	0.00102476
CLU	chr8:27454433-27472328	PDT	ATRA+PDT	4.61759	10.0572	1.12302	0.00005	0.00102476
DUSP2	chr2:96808907-96811179	PDT	ATRA+PDT	12.1886	26.538	1.12252	0.00005	0.00102476
CREB5	chr7:28338939-28865511	PDT	ATRA+PDT	3.6883	8.02894	1.12225	0.00005	0.00102476
KCNE3	chr11:74165885-74178600	PDT	ATRA+PDT	3.59091	7.78606	1.11655	0.00005	0.00102476
SMPD3	chr16:68392229-68482409	PDT	ATRA+PDT	2.86222	6.1399	1.10108	0.00005	0.00102476
ALDH1A3	chr15:101420008-101456830	PDT	ATRA+PDT	17.4142	37.3478	1.10076	0.00005	0.00102476
ARHGDI1	chr12:15094949-15114562	PDT	ATRA+PDT	20.5853	43.954	1.09438	0.00005	0.00102476
NROB2	chr1:27237974-27240567	PDT	ATRA+PDT	1.38854	2.94617	1.08527	0.00055	0.0085238
C1orf130	chr1:24882566-24935818	PDT	ATRA+PDT	1.04809	2.20534	1.07323	0.00005	0.00102476
MMP7	chr11:102391238-102401478	PDT	ATRA+PDT	71.2114	148.966	1.0648	0.00005	0.00102476
IL8	chr4:74606222-74609433	PDT	ATRA+PDT	14.3248	29.5956	1.04686	0.00005	0.00102476
BIRC3	chr11:102188180-102210135	PDT	ATRA+PDT	1.25282	2.58	1.04219	0.00005	0.00102476
MEGF6	chr1:3404505-3528059	PDT	ATRA+PDT	0.819526	1.67993	1.03554	0.00005	0.00102476
EGR1	chr5:137801180-137805004	PDT	ATRA+PDT	4.82157	9.81097	1.02489	0.00005	0.00102476
HBEGF	chr5:139712427-139726188	PDT	ATRA+PDT	20.527	41.5863	1.01859	0.00005	0.00102476
PELI2	chr14:56585092-56768031	PDT	ATRA+PDT	1.87101	3.7817	1.01522	0.00005	0.00102476
Down-regulated genes								
ID2	chr2:8822112-8824583	PDT	ATRA+PDT	5.50856	2.75203	-1.00118	0.00005	0.00102476
SPDEF	chr6:34505578-34524110	PDT	ATRA+PDT	16.5058	8.19596	-1.00999	0.00005	0.00102476
HEPH	chrX:65382432-65487230	PDT	ATRA+PDT	3.62214	1.79148	-1.01569	0.00005	0.00102476
AKR1C1	chr10:5005453-5020158	PDT	ATRA+PDT	50.1133	24.6981	-1.02079	0.00005	0.00102476
GLI2	chr2:121554866-121750229	PDT	ATRA+PDT	1.73488	0.852615	-1.02487	0.00005	0.00102476
FXYD3	chr19:35606731-35615228	PDT	ATRA+PDT	17.5797	8.62688	-1.027	0.00005	0.00102476
FAM3D	chr3:58619669-58652561	PDT	ATRA+PDT	8.77298	4.24277	-1.04806	0.00005	0.00102476
CAPN9	chr1:230883129-230937749	PDT	ATRA+PDT	1.45467	0.70276	-1.04958	0.00145	0.0179618
ASS1	chr9:133320093-133376661	PDT	ATRA+PDT	5.71336	2.75499	-1.05229	0.00005	0.00102476
LRRC31	chr3:169557028-169587660	PDT	ATRA+PDT	1.39178	0.656509	-1.08404	0.0006	0.00910057
MUC13	chr3:124624288-124653595	PDT	ATRA+PDT	28.9957	13.5277	-1.09993	0.00005	0.00102476
CEACAM6	chr19:42259397-42276113	PDT	ATRA+PDT	47.7562	22.2689	-1.10066	0.00005	0.00102476
S100A14	chr1:153586731-153588808	PDT	ATRA+PDT	76.7108	35.2653	-1.12118	0.00005	0.00102476
MSLN	chr16:810764-818865	PDT	ATRA+PDT	2.81002	1.28159	-1.13265	0.00005	0.00102476
PRAP1	chr10:135160843-135166187	PDT	ATRA+PDT	3.20396	1.43399	-1.15982	0.00515	0.0488381
GPD1	chr12:50497800-50505095	PDT	ATRA+PDT	2.28955	1.01978	-1.1668	0.00005	0.00102476
HES6	chr2:239146907-239148681	PDT	ATRA+PDT	5.73401	2.55042	-1.16881	0.00005	0.00102476
GRHL3	chr1:24645811-24741587	PDT	ATRA+PDT	1.75026	0.776258	-1.17296	0.002	0.0229388
DPEP1	chr16:89679715-89704839	PDT	ATRA+PDT	6.81875	2.92142	-1.22284	0.00005	0.00102476
WNT11	chr11:75897369-75917574	PDT	ATRA+PDT	4.1994	1.77853	-1.2395	0.00005	0.00102476
CEACAM5	chr19:42212529-42234437	PDT	ATRA+PDT	12.0597	5.06265	-1.25223	0.00005	0.00102476
ALDH1A1	chr9:75515577-75568233	PDT	ATRA+PDT	405.218	165.602	-1.29098	0.00005	0.00102476
BGN	chrX:152760346-152775004	PDT	ATRA+PDT	16.5827	6.73104	-1.30078	0.00005	0.00102476
ANKS4B	chr16:21245015-21263750	PDT	ATRA+PDT	1.89722	0.765152	-1.31007	0.00005	0.00102476
AIFM3	chr22:21319417-21335649	PDT	ATRA+PDT	1.47668	0.587014	-1.33089	0.00005	0.00102476
IGSF1	chrX:130407482-130423403	PDT	ATRA+PDT	3.04443	1.18424	-1.36221	0.00005	0.00102476
PPP1R1B	chr17:37783176-37792878	PDT	ATRA+PDT	8.15642	2.98407	-1.45065	0.00005	0.00102476
DDC	chr7:50526133-50633154	PDT	ATRA+PDT	11.9731	4.23146	-1.50057	0.00005	0.00102476
RNASE4	chr14:21152335-21168758	PDT	ATRA+PDT	2.37664	0.837993	-1.50391	0.00085	0.0119898
PSCA	chr8:143751725-143764145	PDT	ATRA+PDT	1.7825	0.615034	-1.53516	0.002	0.0229388
SOSTDC1	chr7:16501105-16505474	PDT	ATRA+PDT	1.20435	0.404531	-1.57393	0.0015	0.0184954
AXIN2	chr17:63524682-63557740	PDT	ATRA+PDT	14.4559	4.59396	-1.65385	0.00005	0.00102476
CCL15	chr17:34310691-34329084	PDT	ATRA+PDT	15.6012	4.77259	-1.70881	0.00005	0.00102476
ABCC2	chr10:101542462-101611662	PDT	ATRA+PDT	1.13309	0.335678	-1.75511	0.00005	0.00102476
PRODH	chr22:18900286-18924066	PDT	ATRA+PDT	1.66635	0.459819	-1.85756	0.0001	0.00194145
LEPREL1	chr3:189674516-189840226	PDT	ATRA+PDT	3.14966	0.868411	-1.85875	0.00005	0.00102476
ST6GALNAC1	chr17:74620844-74639894	PDT	ATRA+PDT	1.73672	0.466286	-1.89708	0.00005	0.00102476
HHLA2	chr3:108021331-108097126	PDT	ATRA+PDT	4.62643	1.14286	-2.01725	0.00005	0.00102476
ANXA13								