Reduced levels of Prostaglandin I2 Synthase specify the cancer-free trichothiodystrophy

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MATERIALS AND METHODS

Cell Culture Conditions. Primary cultures of dermal fibroblasts were established from biopsies taken from sun-unexposed areas of the skin. These samples were de-identified prior to use in this study. Mouse embryonic fibroblasts were isolated from the WT and TTD mouse line XPD^{R722W}, which share identical genetic background (100% C57BL/6). Cells were routinely cultured at 37° C in a humidified atmosphere conditioned with 5% CO_2. Fibroblasts were grown in a 1:1 mixture of HAM's F-10 (EuroClone) and DMEM (EuroClone) supplemented with 10% FBS (Australian Origin, Lonza), 2 mM L-glutamine (EuroClone), 100 U/mL of Penicillin, and 0.1 mg/mL of Streptomicin (EuroClone).

For UV treatment, fibroblasts were cultured under standard conditions, rinsed in phosphate buffered saline (PBS), exposed to a UV-C dose of 10 J/m^2 using a UV Stratalinger and subsequently recovered in fresh culture medium for 2hrs inside the incubator at 37°C with 5% CO2. Untreated cells were processed in parallel.

cDNA Preparation and Library Preparation for Next-Generation Sequencing.

As first step, $2x10^6$ primary dermal fibroblasts were cultured under standard conditions, rinsed in fresh PBS and purified using the RNeasy Mini Kit (Qiagen) according to manufacturer's instructions. Trace DNA was removed by DNase treatment using the Turbo DNA-free kit (Ambion, Applied Biosystems), according to manufacturer's instructions. RNA was quantified using the Nanodrop 1000

Spectromphotometer (Thermo Scientific) and RNA quality was evaluated by looking the 18S/28S RNA ratio following agarose gel electrophoresis. 4 µg of RNAs were sent to Instituto di Genomica Applicata (IGA) for sequencing and RNAseq processing. Briefly, total RNAs were subjected to polyA+ fraction selection and transformed in a cDNA library for next-generation sequencing by the use of the TruSeq RNA Sample Prep kit (Illumina) according to manufacturer's protocol. A total of 60 million sequence reads were obtained for each cell line in three biological replicates, using 2×100 bp paired end reads on an Illumina HiSeq2500 instrument (60 million reads / replicate).

Processing of mRNA Sequencing Data. Raw reads were subjected to standard quality control procedures with the NGSQC-toolkit software and aligned to the human genome reference sequence (NCBI37/hg19) by the TopHat alignment software (1). The resulting SAM files were sorted and converted to BAM files using SAMtools (version 1.7). Genes were annotated and quantified according to the TopHat-Cufflinks protocol and differential gene expression analysis was performed by CuffDiff (2) using default parameters. Differentially expressed genes were selected based on a adjusted p-value < 0.05 threshold.

The most deregulated subset of genes was deeply analysed through the Integrative Genomic Viewer (IGV), a high-performance visualization tool for interactive exploration of datasets, including RNA-seq aligned sequence reads. All Gene Ontology (GO) analyses were performed with DAVID and REVIGO Bioinformatics tools (https://david.ncifcrf.gov/; http://revigo.irb.hr/), and only Biological Process terms were kept for downstream analyses.

RealTime Ready Custom Panel and Quantitative Real-Time RT-PCR. RNA extraction and DNase treatment were performed using the RNeasy Purification Kit (Qiagen) and Turbo DNA-free kit (Ambion, Applied Biosystems), respectively, according to the manufacturer's instructions. RNA

pools were obtained by mixing equal amounts of RNA from the fibroblasts of either 4 TTD patients reported in Suppl Table S7 (TTD pool) or 4 healthy individuals (parents of TTD7PV and TTD12PV/TTD15PV). One microgram of each RNA pool was reverse-transcribed using the iScript cDNA Synthesis kit (Bio-Rad). The cDNAs were diluted 1:25 in water and 5-µL aliquots were used as template in real-time PCR reactions in 96-well format RealTime ready Custom Panels (Roche). Each gene assay contained 0.4 µM of gene specific primers and 0.2 µM of a Universal ProbeLibrary. The primers were directed to amplify the 174 target genes identified by the RNAseq analysis (see list in Suppl Table S6) and the three reference genes (*G6PD*, *GAPDH*, and *YWHAZ*). The amplification efficiency of each reaction was 2.0 ± 0.2 and the cycle threshold (Ct) of each transcript was automatically given by the LightCycler480 software package (Roche). The expression analysis of each gene in TTD and normal pools was done in triplicate. Quality of the data and quantifications were computed by applying the Relative Quantification Analysis using the 2-ΔΔCt method (3). The fold change (FC) of target genes in TTD was calculated by normalizing each Ct value to the geometric mean of the three reference genes (*G6PD*, *GAPDH* and *YWHAZ*) and to the mean value of the corresponding gene in the control sample. The fold-change in the TTD pool was calculated as $2^{-(\Delta Ct\ \text{patients} - \Delta Ct\ \text{normal})}$ by using the $2^{-\Delta\Delta Ct}$ method. By using this approach, the absence of variation is equivalent to 1. For transcript analysis in individual cell strains, 2 µg of RNA was reverse-transcribed in a single RT reaction using the iScript Reverse Transcriptase kit (Bio-Rad). The cDNAs were diluted 1:10 in water and 4 µL were used as template in real-time PCR reactions containing 10 pmol of each forward and reverse primers (provided by Roche). The real-time reactions were performed using the LightCycler 480 Real-Time PCR System (Roche). Standard curves were obtained for each primer set with serial dilutions of cDNA and the relative amount of each mRNA was normalized to the relative amount of the housekeeping gene *GAPDH*.

Reduced transcriptional machinery occupancy on *PTGIS* promoter in PS-TTD skin fibroblasts

Chromatin immunoprecipitation (ChIP) analysis has been applied to investigate the mechanistic failure of *PTGIS* promoter in PS-TTD cells. TFIIH and the hypophosphorylated form of RNAP II (RNAP IIA) are two essential elements of the transcription preinitiation complex (PIC) that assembles on active gene promoters. Thus, antibodies directed against the XPB subunit of the TFIIH complex or against RNAP IIA were used to immunoprecipitate the chromatin of primary dermal fibroblasts from PS-TTD, XP or healthy individuals. The PCR amplification of co-immunoprecipitated genomic DNA fragment spanning the 5' region of *PTGIS* transcript allowed the detection of the transcription machinery occupancy on this gene. As shown in Fig. 5, very low levels of RNAP II and TFIIH were observed in PS-TTD compared to control cells, indicating that TTD-specific alterations impact on the recruitment of the transcription apparatus on *PTGIS* promoter.

Immunoblot Analysis. Immunoblot analyses were performed according to standard protocols (4) using primary antibodies raised against ANGPTL-4 (Ab115798, Abcam), c-Jun (sc-1694, Santa Cruz Biotechnology), CLU (sc-166907, Santa Cruz Biotechnology), EGR1 (sc-101033, Santa Cruz Biotechnology), GADD45A(sc-796, Santa Cruz Biotechnology), GADD45B (sc-377311, Santa Cruz Biotechnology), ID1 (sc-133104, Santa Cruz Biotechnology) ID3 (sc56712, Santa Cruz Biotechnology), IER3 (ab65152, Abcam), IL20RB (Ab169620, Abcam), JunD (sc-271938, Santa Cruz Biotechnology), PTGIS (Ab72952, Abcam), WISP2 (Ab38317, Abcam), WNT-4 (Ab169592, Abcam), and γ-tubulin (Sigma).

Proteins were extracted from skin tissue samples derived from WT and TTD females XPD^{R722W} mice by homogenizing the tissue with an electric homogenizer (ULTRATURREX T25) in lysis buffer (RIPA) containing protease inhibitor cocktail (PIC). The homogenate is spun at 12,000 g for 20 min at 4°C, the supernatant collected and processed for immunoblot analysis.

Statistical analysis.

All experiments were independently repeated at least three times. Quantitative data are presented as means ± SEM. The p values were calculated for each sample using paired two-tailed t test. We assigned * (p value < 0.05), ** (p value < 0.01) *** (p value < 0,001) in all Chip and RealTime RT-PCR experiments. The absence of *, ** or *** means that the respective measurement is not significantly different to t = 0.

REFERENCES

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LEGENDS

Fig. S1 Functional annotation clustering of the transcriptionally altered genes in TTD7PV fibroblasts. Schematic representation of the Gene Ontology (GO) biological processes enrichment of the transcriptionally deregulated genes in TTD cells in basal condition (A) or after UV-irradiation (B) obtained by sequentially using the DAVID and REVIGO bioinformatics tools. The top enriched pathways (FDR ≤ 0.05) are indicated based on their p values (P ≤ 0.05).

Fig. S2 Gene expression analysis of the UV-responsive genes by real time RT-PCR. The graph indicates the transcription levels of *EGR1, ID3, c-Jun, IER3, ANGPTL4, GADD45B* and *GADD45*A genes in fibroblasts from the healthy control (CTR), parents of TTD12PV-15PV, TTD11PV and TTD7PV (*black bars*), from the TTD/XP-D patients TTD12PV, TTD15PV, TTD11PV, TTD7PV, TTD23PV, TTD20PV, TTD8PV (*red bars*) and from the XP/XP-D patients XP15PV, XP-16PV, XP17PV, XP49BR and XP1BR (*blue bars*) cultured under basal condition (NT, *solid bars*) and after UV irradiation (UV, *empty bars*). The expression level of each gene was normalized to the corresponding expression level of the *GAPDH* housekeeping gene and then to the expression level of the internal control sample TTD12-15PVfather. The reported values represent the means of at least two independent experiments, whose samples have been analyzed in triplicate. Bars indicate the standard errors. M: mother, F: father. Test of significance between the different groups are reported in Fig. 2A.

Fig. S3 Gene expression analysis of the UV-responsive genes by real time RT-PCR. The graph indicates the transcription levels of *IL20RB, PTGIS, JunD, CLU, WISP2, WNT4* and *ID1* genes in fibroblasts from the healthy control (CTR) parents of TTD12PV-15PV, TTD11PV and TTD7PV (*black bars*), from the TTD/XP-D patients TTD12PV, TTD15PV, TTD11PV, TTD7PV, TTD23PV, TTD20PV, TTD8PV (*red bars*) and from the XP/XP-D patients XP15PV, XP-16PV, XP17PV, XP49BR and XP1BR (*blue bars*) cultured under basal condition (NT, *solid bars*) and after UV irradiation (UV, *empty bars*). The expression level of each gene was normalized to the corresponding expression level of the *GAPDH* housekeeping gene and then to the expression level of the internal control sample TTD12-15PVfather. The reported values represent the means of at least two independent experiments, whose samples have been analyzed in triplicate. Bars indicate the standard errors. M: mother, F: father. Test of significance between the different groups are reported in Fig. 2B.

Fig. S4 Gene expression of the UV-responsive gene *c-FOS* by real time RT-PCR. The graph indicates the transcription levels of *c-FOS* in fibroblasts from the healthy control (CTR) parents of TTD12PV-15PV, TTD11PV and TTD7PV (*black bars*), from the TTD/XP-D patients TTD12PV, TTD15PV, TTD11PV, TTD7PV, TTD23PV, TTD20PV, TTD8PV (*red bars*) and from the XP/XP-D patients XP15PV, XP-16PV, XP17PV, XP49BR and XP1BR (*blue bars*) cultured under basal condition (*solid bars*) and after UV irradiation (*empty bars*). The expression level of *c-FOS* was normalized to the corresponding expression level of the *GAPDH* housekeeping gene and then to the expression level of the internal control sample TTD12-15PVfather. The reported values represent the means of at least two independent experiments, whose samples have been analyzed in triplicate. Bars indicate the standard errors. M: mother, F: father. **B**) The graph indicates the mean values of the transcript levels shown in A. NT indicates the fibroblasts cultured under basal condition, UV the fibroblasts upon UV irradiation. Bars indicate the standard errors. (*$P < 0.05$; Student's t-test, only the significant differences are shown).

Fig. S5 Immunoblot analysis of (**A**) ANGPTL4 and (**B**) WISP2, CLU, EGR1, c-Jun, JunD, GADD45A and ID1 in total cell lysates of primary fibroblasts from healthy controls (C3PV, TTD12-15PV parents and XP15-16PV parents) or TTD/XP-D or XP/XP-D patients. When indicated fibroblasts were cultured under basal condition (NT) or 2 hrs after UV irradiation (UV). γ-tubulin is the loading control. The reported values are the mean of at least three independent experiments. Bars indicate standard errors. Abbreviations: NT, not treated; au, arbitrary unit.

Fig. S6 Immunoblot analysis of XPB, CdK7 and PTGIS in total cell lysates of primary fibroblasts from healthy control (C3PV) or TS-TTD (TTD1RO). Fibroblasts were cultured at 37° C or 41° C for 10 hours. γ-tubulin is the loading control. The reported values are the mean of at least three

independent experiments. Bars indicate standard errors. Abbreviations: NT, not treated; au, arbitrary unit; TS, termo-sensitive.

Fig. S7 Real time quantification of *ANGPTL4*, *PTGIS*, *WISP2*, *EGR1*, *IL20RB* and *WNT4* transcripts in mouse embryonic fibroblasts (MEFs) from XPD^{R722W} mice. The graphs indicate the mean values of the transcript levels identified in MEFs isolated from wild type (WT, *grey solid bars*) and TTD (*black empty bars*) mice. The gene expression was normalized to the expression of the rRNA 18S. Bars indicate the standard errors. The reported values represent the means of at least two independent experiments, whose samples have been analyzed in triplicate.

Fig. S1

A

REVIGO Gene Ontology treemap

B

REVIGO Gene Ontology treemap

Fig. S2

EGR1

ANGPTL4

ID3

c-JUN

IER3

GADD45B

GADD45A

Fig. S3

IL20RB

JunD

PTGIS

WISP2

CLU

WNT4

ID1

Fig. S4

A   *c-Fos*

B   *c-Fos*

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CTR UV
PS-TTD NT
PS-TTD UV
XP NT
XP UV
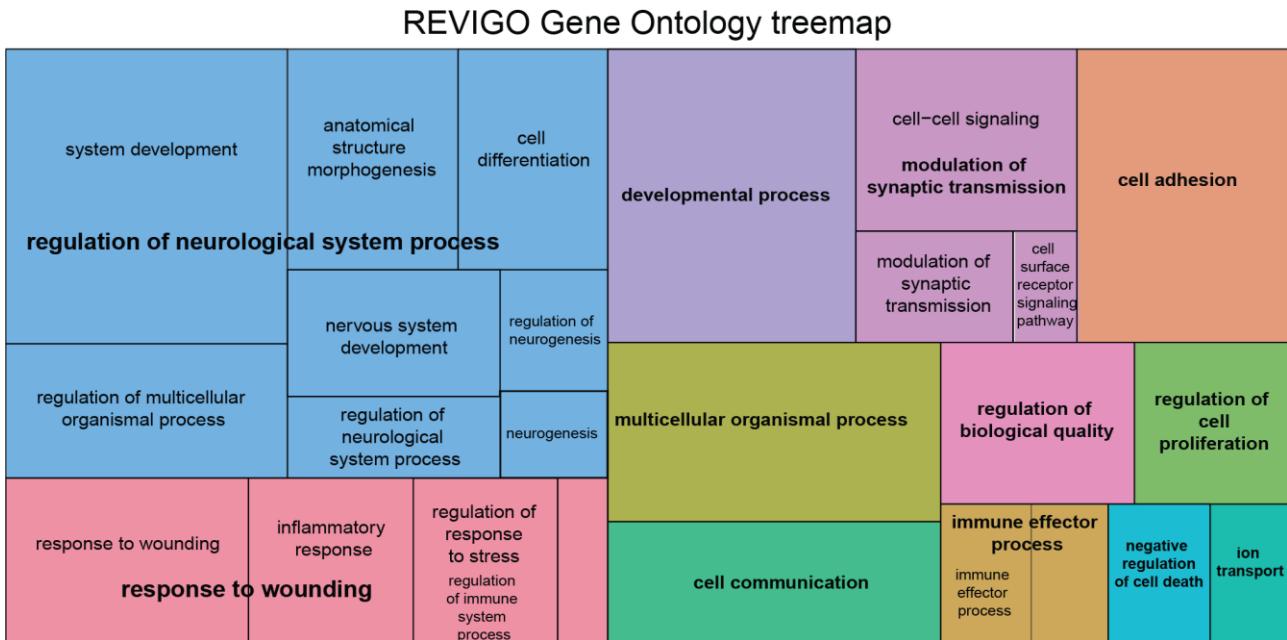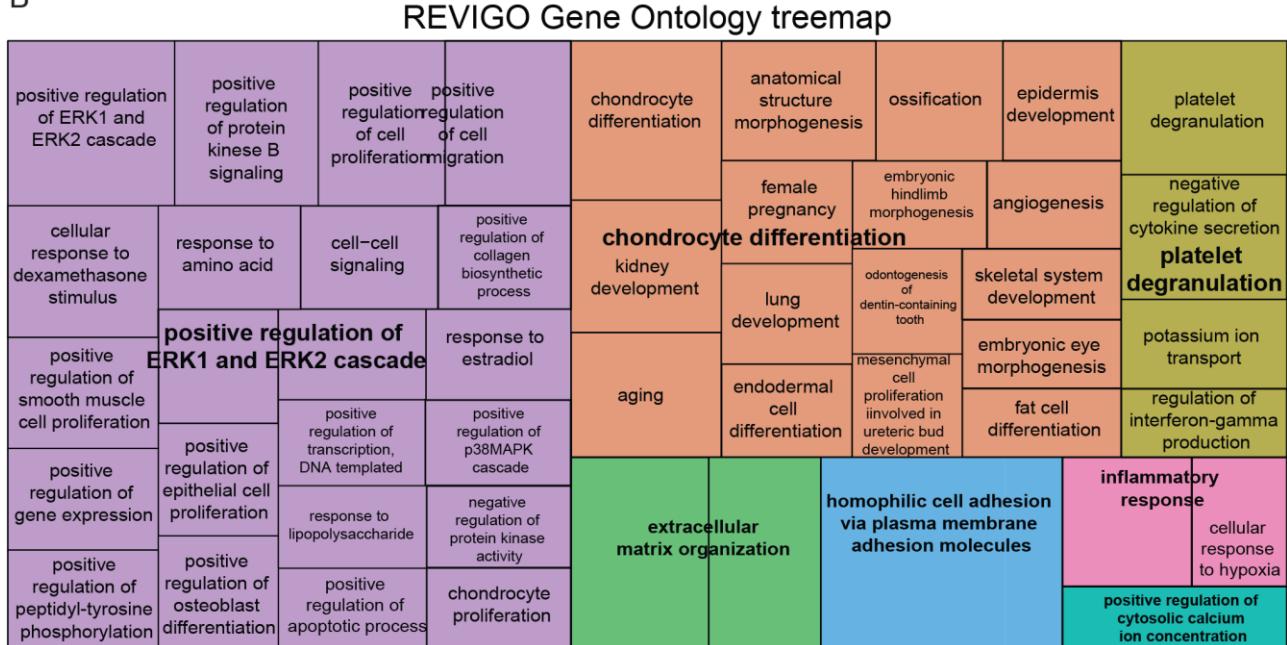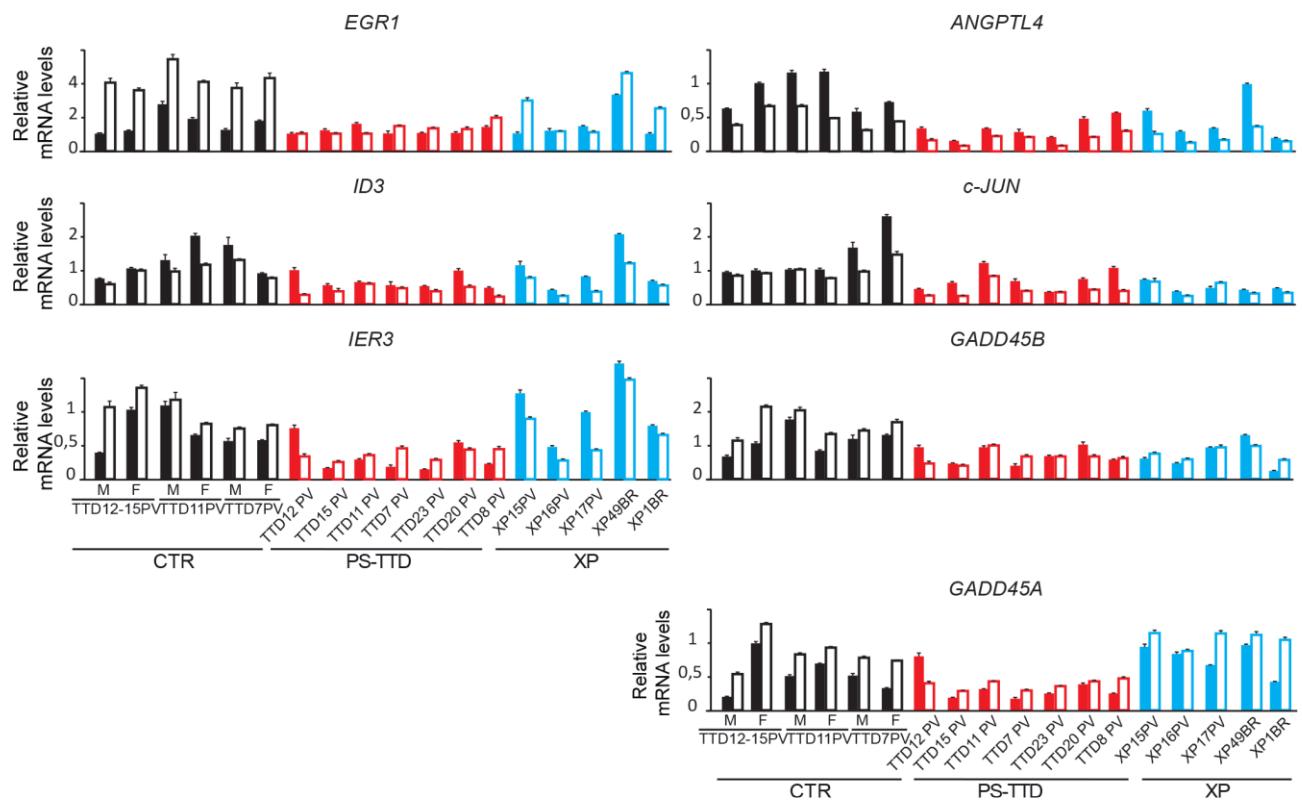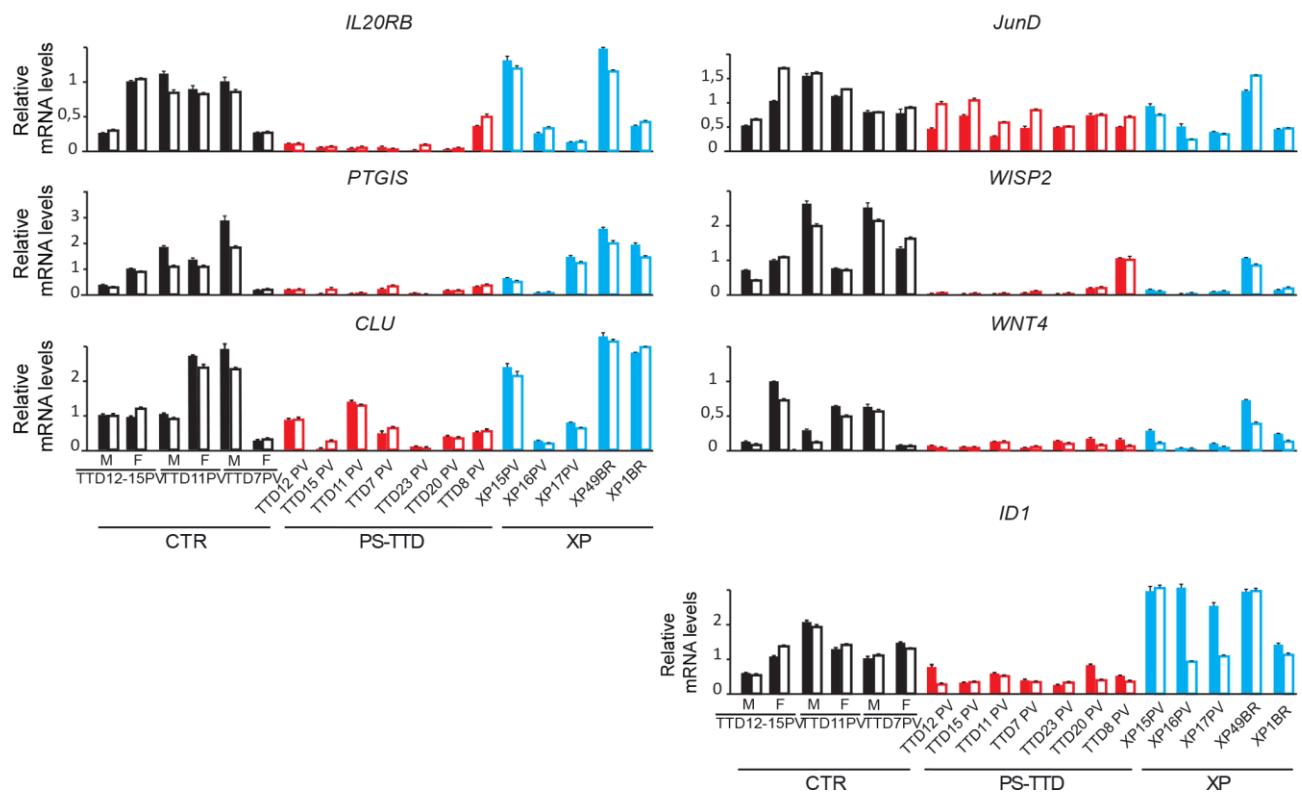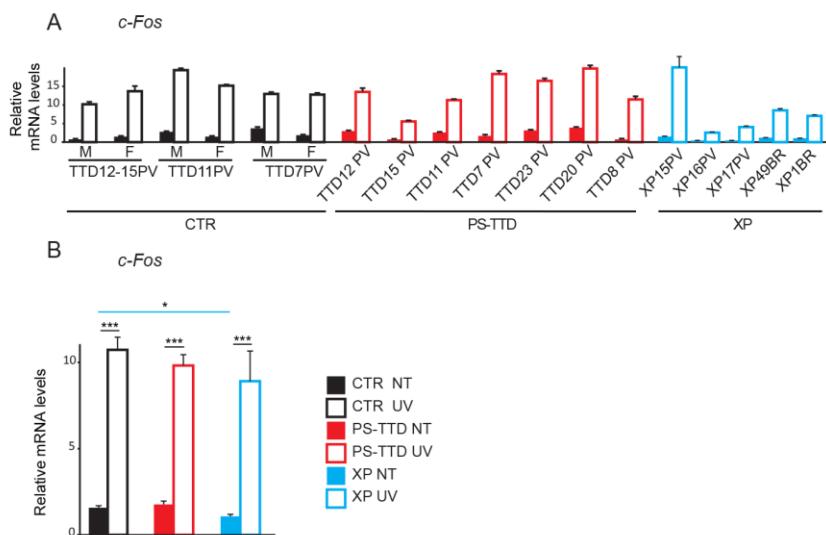
Fig. S5

A

B

Fig. S6

Fig. S7

13
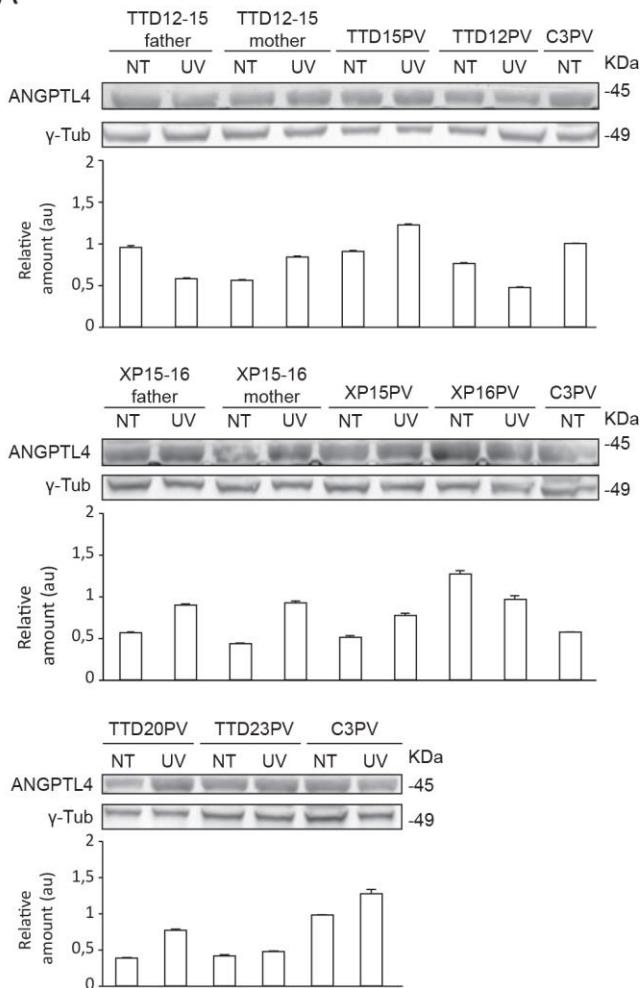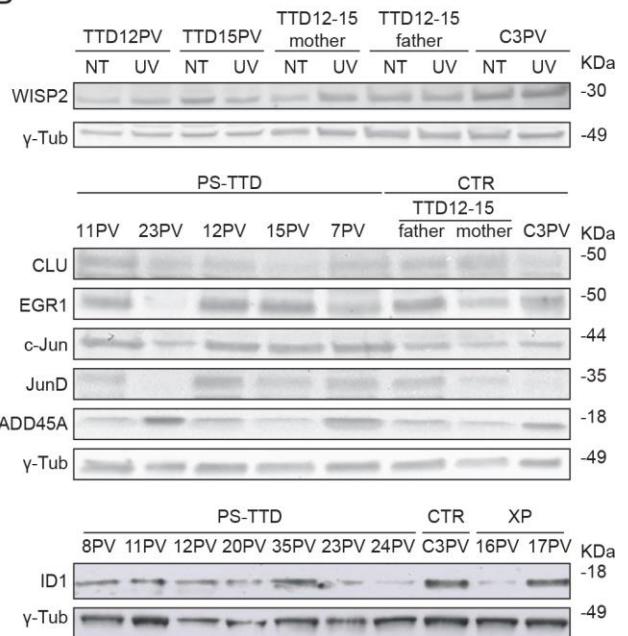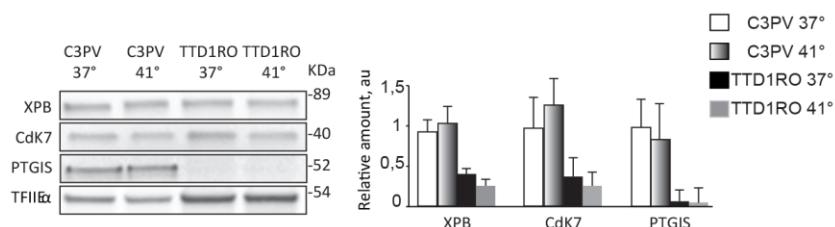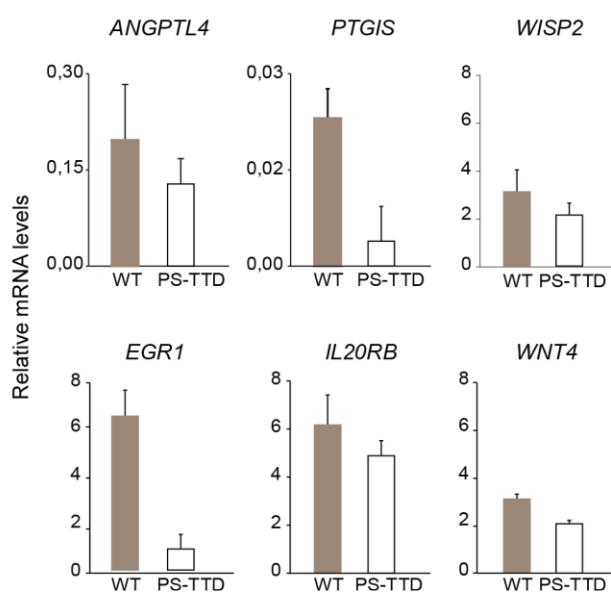
Table S1. The most significant differentially expressed genes (P-value ≤ 0.05) for TTD7PVmother versus TTD7PV fibroblasts in basal condition by RNA-seq

| test_id	locus	sample_1	sample_2	status	value_1	value_2	log2(FC)	test_stat	p_value	q_value	significant
A2M	chr12:9217772-9268558	TTD7PVmother_nt	TTD7PV_nt	OK	1.66737	0.440954	-1.91887	-3.0419	5.00E-05	0.000948525	yes
ABAT	chr16:8768443-8878432	TTD7PVmother_nt	TTD7PV_nt	OK	5.44709	1.75738	-1.63206	-4.1775	5.00E-05	0.000948525	yes
ABCA5	chr17:67144147-67323323	TTD7PVmother_nt	TTD7PV_nt	OK	1.66646	0.68467	-1.2833	-3.0411	5.00E-05	0.000948525	yes
ABCC3	chr17:48712217-48769063	TTD7PVmother_nt	TTD7PV_nt	OK	9.82092	4.40308	-1.15734	-2.8166	5.00E-05	0.000948525	yes
ABCC9	chr12:21950323-22089628	TTD7PVmother_nt	TTD7PV_nt	OK	7.70742	1.16446	-2.72659	-7.7142	5.00E-05	0.000948525	yes
ABLIM1	chr10:116190868-116444414	TTD7PVmother_nt	TTD7PV_nt	OK	0.7435	0.338822	-1.1338	-2.0972	0.0007	0.00906687	yes
ACOT1	chr14:73945188-74025651	TTD7PVmother_nt	TTD7PV_nt	OK	9.04233	2.97942	-1.60166	-2.5465	0.00025	0.00388815	yes
ACP5	chr19:11685474-11689801	TTD7PVmother_nt	TTD7PV_nt	OK	0.83496	0.294078	-1.50551	-1.7152	0.00335	0.0318932	yes
ACTG2	chr2:74120092-74146780	TTD7PVmother_nt	TTD7PV_nt	OK	0.11754	0.847859	2.85062	2.45362	0.00295	0.0286146	yes
ADAMTS7	chr15:79051544-79103773	TTD7PVmother_nt	TTD7PV_nt	OK	12.2812	4.71733	-1.38041	-4.235	5.00E-05	0.000948525	yes
ADARB1	chr21:46494492-46646478	TTD7PVmother_nt	TTD7PV_nt	OK	7.30119	2.99451	-1.28581	-3.4641	5.00E-05	0.000948525	yes
ADCY4	chr14:24787554-24804277	TTD7PVmother_nt	TTD7PV_nt	OK	4.38309	1.0362	-2.08064	-4.4523	5.00E-05	0.000948525	yes
ADD2	chr2:70889215-70995375	TTD7PVmother_nt	TTD7PV_nt	OK	0.6088	2.13271	1.80865	3.05896	5.00E-05	0.000948525	yes
ADH1B	chr4:100227526-100242572	TTD7PVmother_nt	TTD7PV_nt	OK	1.25377	3.69369	1.55879	3.24756	5.00E-05	0.000948525	yes
ADIRF	chr10:88728187-88769960	TTD7PVmother_nt	TTD7PV_nt	OK	27.0029	12.8958	-1.06621	-2.2344	5.00E-05	0.000948525	yes
ADORA1	chr1:203096835-203136533	TTD7PVmother_nt	TTD7PV_nt	OK	0.65023	0.034998	-4.21561	-2.8773	0.00105	0.0124816	yes
ADRA1B	chr5:159343739-159400017	TTD7PVmother_nt	TTD7PV_nt	OK	0.37612	2.05779	2.45181	4.12543	5.00E-05	0.000948525	yes
ADRA2A	chr10:112836789-112840662	TTD7PVmother_nt	TTD7PV_nt	OK	18.9875	3.61544	-2.39281	-7.6618	5.00E-05	0.000948525	yes
AFF3	chr2:100163715-100759037	TTD7PVmother_nt	TTD7PV_nt	OK	0.80646	2.59973	1.68868	3.98067	5.00E-05	0.000948525	yes
AGTR1	chr3:148415657-148460790	TTD7PVmother_nt	TTD7PV_nt	OK	0.74753	3.81894	2.35296	4.16632	5.00E-05	0.000948525	yes
AHNAK2	chr14:105403590-105444694	TTD7PVmother_nt	TTD7PV_nt	OK	19.1268	9.4339	-1.01967	-2.7059	5.00E-05	0.000948525	yes
AIM1	chr6:106959729-107018334	TTD7PVmother_nt	TTD7PV_nt	OK	1.27528	3.35957	1.39746	3.79979	5.00E-05	0.000948525	yes
AKR1C2	chr10:5029967-5060225	TTD7PVmother_nt	TTD7PV_nt	OK	30.8992	9.88373	-1.64444	-3.9859	5.00E-05	0.000948525	yes
ALDH1A1	chr9:75515577-75568233	TTD7PVmother_nt	TTD7PV_nt	OK	0.36566	1.11395	1.60711	2.39503	0.0007	0.00906687	yes
ALDH1A3	chr15:101420008-101456830	TTD7PVmother_nt	TTD7PV_nt	OK	60.3486	212.342	1.815	5.33869	5.00E-05	0.000948525	yes
ALDH1B1	chr9:38392660-38398662	TTD7PVmother_nt	TTD7PV_nt	OK	20.8103	9.54138	-1.12503	-3.4688	5.00E-05	0.000948525	yes
ALDH2	chr12:112204690-112247789	TTD7PVmother_nt	TTD7PV_nt	OK	25.0165	62.032	1.31013	4.05388	5.00E-05	0.000948525	yes
ALDH3B1	chr11:67776047-67796743	TTD7PVmother_nt	TTD7PV_nt	OK	18.2788	5.65484	-1.69262	-4.8542	5.00E-05	0.000948525	yes
ALS2CL	chr3:46710484-46735194	TTD7PVmother_nt	TTD7PV_nt	OK	1.15552	0.264842	-2.12533	-3.3292	5.00E-05	0.000948525	yes
AMIGO1	chr1:110049445-110052336	TTD7PVmother_nt	TTD7PV_nt	OK	1.40918	0.22879	-2.62276	-4.0422	5.00E-05	0.000948525	yes
AMIGO2	chr12:47469489-47473734	TTD7PVmother_nt	TTD7PV_nt	OK	15.6896	7.12738	-1.13837	-3.1912	5.00E-05	0.000948525	yes

Gene	Location										
AMPD3	chr11:10471867-10529126	TTD7PVmother_nt	TTD7PV_nt	OK	5.7657	1.95282	-1.56194	-4.0622	5.00E-05	0.000948525	yes
ANGPT1	chr8:108261709-108510254	TTD7PVmother_nt	TTD7PV_nt	OK	4.78695	1.00436	-2.25283	-4.9928	5.00E-05	0.000948525	yes
ANGPTL4	chr19:8429010-8439257	TTD7PVmother_nt	TTD7PV_nt	OK	8.19451	3.15691	-1.37615	-3.1123	5.00E-05	0.000948525	yes
ANKRD33B	chr5:10564434-10657928	TTD7PVmother_nt	TTD7PV_nt	OK	2.43557	0.945505	-1.3651	-3.6418	5.00E-05	0.000948525	yes
ANKRD44	chr2:197851385-198175521	TTD7PVmother_nt	TTD7PV_nt	OK	2.86358	1.37496	-1.05843	-2.2494	0.0004	0.00575481	yes
ANO4	chr12:101188373-101522419	TTD7PVmother_nt	TTD7PV_nt	OK	1.57658	0.37308	-2.07924	-3.929	5.00E-05	0.000948525	yes
ANTXR1	chr2:69240275-69476459	TTD7PVmother_nt	TTD7PV_nt	OK	120.895	57.9711	-1.06035	-2.6238	5.00E-05	0.000948525	yes
AP1S2	chrX:15843928-15873137	TTD7PVmother_nt	TTD7PV_nt	OK	22.167	9.67943	-1.19542	-3.7963	5.00E-05	0.000948525	yes
AP1S3	chr2:224620046-224702319	TTD7PVmother_nt	TTD7PV_nt	OK	0.8322	0.358861	-1.2135	-2.2535	0.0017	0.0184518	yes
APBB1IP	chr10:26727265-26856732	TTD7PVmother_nt	TTD7PV_nt	OK	27.3044	7.10639	-1.94194	-6.3645	5.00E-05	0.000948525	yes
APCDD1L	chr20:57034425-57089949	TTD7PVmother_nt	TTD7PV_nt	OK	6.4163	1.04156	-2.62299	-6.428	5.00E-05	0.000948525	yes
APOL1	chr22:36649116-36663577	TTD7PVmother_nt	TTD7PV_nt	OK	3.89405	0.335352	-3.53752	-5.6749	5.00E-05	0.000948525	yes
AQP1	chr7:30951414-30965131	TTD7PVmother_nt	TTD7PV_nt	OK	1.07514	0.464637	-1.21035	-1.8086	0.00145	0.0163452	yes
AR	chrX:66763873-66950461	TTD7PVmother_nt	TTD7PV_nt	OK	1.22311	0.061029	-4.32491	-6.894	5.00E-05	0.000948525	yes
ARC	chr8:143692404-143695833	TTD7PVmother_nt	TTD7PV_nt	OK	3.13932	0.196181	-4.0002	-6.3894	5.00E-05	0.000948525	yes
ARHGAP22	chr10:49654067-49864310	TTD7PVmother_nt	TTD7PV_nt	OK	8.39682	3.26384	-1.36327	-3.4594	5.00E-05	0.000948525	yes
ARHGAP23	chr17:36584719-36668628	TTD7PVmother_nt	TTD7PV_nt	OK	25.3749	56.2557	1.14859	3.67765	5.00E-05	0.000948525	yes
ARHGEF28	chr5:72921982-73237818	TTD7PVmother_nt	TTD7PV_nt	OK	2.2196	0.595016	-1.8993	-3.9321	5.00E-05	0.000948525	yes
ARL4D	chr17:41476352-41478504	TTD7PVmother_nt	TTD7PV_nt	OK	21.7015	10.3758	-1.06458	-3.5611	5.00E-05	0.000948525	yes
ARRB1	chr11:74971165-75062875	TTD7PVmother_nt	TTD7PV_nt	OK	1.19688	0.355455	-1.75155	-3.4195	5.00E-05	0.000948525	yes
ARRDC4	chr15:98503932-98517068	TTD7PVmother_nt	TTD7PV_nt	OK	7.91167	2.65044	-1.57775	-4.5324	5.00E-05	0.000948525	yes
ASIC3	chr7:150745378-150749843	TTD7PVmother_nt	TTD7PV_nt	OK	0.58296	0.238396	-1.29003	-1.6447	0.00575	0.0484643	yes
ASNS	chr7:97481428-97501854	TTD7PVmother_nt	TTD7PV_nt	OK	41.1515	98.1499	1.25404	3.80716	5.00E-05	0.000948525	yes
ASS1	chr9:133320093-133376661	TTD7PVmother_nt	TTD7PV_nt	OK	16.8307	51.3917	1.61044	4.44453	5.00E-05	0.000948525	yes
ATF5	chr19:50392912-50437193	TTD7PVmother_nt	TTD7PV_nt	OK	83.4034	36.5772	-1.18916	-2.6567	5.00E-05	0.000948525	yes
ATP13A3	chr3:194123402-194188968	TTD7PVmother_nt	TTD7PV_nt	OK	61.1736	24.8814	-1.29784	-4.4069	5.00E-05	0.000948525	yes
ATP6V1G3	chr1:198492351-198510075	TTD7PVmother_nt	TTD7PV_nt	OK	1.52336	0.356214	-2.09644	-1.6694	0.00515	0.0445157	yes
ATP8B4	chr15:50150434-50411419	TTD7PVmother_nt	TTD7PV_nt	OK	0.85327	0.254311	-1.74641	-2.9474	5.00E-05	0.000948525	yes
B3GALT4	chr6_qbl_hap6:4477155-4478841	TTD7PVmother_nt	TTD7PV_nt	OK	2.20387	0.987528	-1.15814	-2.2803	0.002	0.0210507	yes
B3GNT8	chr19:41931263-41934635	TTD7PVmother_nt	TTD7PV_nt	OK	2.75562	0.944645	-1.54453	-3.1507	5.00E-05	0.000948525	yes
BAI2	chr1:32192717-32229648	TTD7PVmother_nt	TTD7PV_nt	OK	2.83284	0.998036	-1.50508	-3.5498	5.00E-05	0.000948525	yes
BCHE	chr3:165490691-165555253	TTD7PVmother_nt	TTD7PV_nt	OK	1.4535	6.03616	2.0541	4.97313	5.00E-05	0.000948525	yes
BEAN1	chr16:66461199-66527432	TTD7PVmother_nt	TTD7PV_nt	OK	0.90708	0.152173	-2.57552	-2.7347	5.00E-05	0.000948525	yes

BEX1	chrX:102317580-102319168	TTD7PVmother_nt	TTD7PV_nt	OK	4.65986	0.194329	-4.58371	-5.6911	0.0006	0.00798882	yes
BEX2	chrX:102564273-102565974	TTD7PVmother_nt	TTD7PV_nt	OK	0.60365	2.96011	2.29386	2.7427	5.00E-05	0.000948525	yes
BHMT2	chr5:78365546-78385897	TTD7PVmother_nt	TTD7PV_nt	OK	3.35265	1.61434	-1.05436	-2.1477	0.00045	0.0062912	yes
BMP2	chr20:6748744-6760910	TTD7PVmother_nt	TTD7PV_nt	OK	3.10857	0.857126	-1.85867	-3.9056	5.00E-05	0.000948525	yes
BTN2A2	chr6:26383323-26395100	TTD7PVmother_nt	TTD7PV_nt	OK	3.38699	1.44275	-1.23119	-2.3936	0.0001	0.00172182	yes
BTN3A2	chr6:26365397-26378548	TTD7PVmother_nt	TTD7PV_nt	OK	2.32863	4.71795	1.01868	2.42967	5.00E-05	0.000948525	yes
C10orf10	chr10:45455218-45490172	TTD7PVmother_nt	TTD7PV_nt	OK	6.05894	1.78893	-1.75997	-3.0299	0.00015	0.00249264	yes
C11orf45	chr11:128761312-128787951	TTD7PVmother_nt	TTD7PV_nt	OK	0.43951	0.124266	-1.82245	-2.2491	0.00055	0.00745427	yes
C11orf87	chr11:109292845-109299893	TTD7PVmother_nt	TTD7PV_nt	OK	1.09611	3.32365	1.60038	4.45993	5.00E-05	0.000948525	yes
C14orf37	chr14:58470807-58618847	TTD7PVmother_nt	TTD7PV_nt	OK	7.17354	3.38589	-1.08315	-2.9798	5.00E-05	0.000948525	yes
C17orf97	chr17:260117-264457	TTD7PVmother_nt	TTD7PV_nt	OK	1.68594	4.90312	1.54014	3.54952	5.00E-05	0.000948525	yes
C1QTNF1	chr17:77015290-77045870	TTD7PVmother_nt	TTD7PV_nt	OK	5.76818	1.4694	-1.97289	-4.3611	5.00E-05	0.000948525	yes
C1orf115	chr1:220863627-220872499	TTD7PVmother_nt	TTD7PV_nt	OK	4.08693	0.736264	-2.47272	-5.0512	5.00E-05	0.000948525	yes
C1orf198	chr1:230972864-231005335	TTD7PVmother_nt	TTD7PV_nt	OK	55.0879	24.6383	-1.16084	-3.5553	5.00E-05	0.000948525	yes
C21orf7	chr21:30452872-30548202	TTD7PVmother_nt	TTD7PV_nt	OK	10.2541	4.8271	-1.08697	-3.3012	5.00E-05	0.000948525	yes
C2orf74	chr2:61372242-61391964	TTD7PVmother_nt	TTD7PV_nt	OK	5.33371	12.5187	1.23087	2.32073	0.0001	0.00172182	yes
C3	chr19:6677845-6720662	TTD7PVmother_nt	TTD7PV_nt	OK	1.78645	3.67975	1.04252	2.52422	5.00E-05	0.000948525	yes
C3orf55	chr3:157261132-157319021	TTD7PVmother_nt	TTD7PV_nt	OK	6.13462	1.25471	-2.28962	-3.6443	5.00E-05	0.000948525	yes
C3orf72	chr3:138666075-138672830	TTD7PVmother_nt	TTD7PV_nt	OK	1.41411	0.137304	-3.36445	-5.2813	5.00E-05	0.000948525	yes
C5AR2	chr19:47835403-47845272	TTD7PVmother_nt	TTD7PV_nt	OK	1.05249	0.200438	-2.39258	-2.4486	0.0001	0.00172182	yes
CACNB2	chr10:18429605-18830688	TTD7PVmother_nt	TTD7PV_nt	OK	0.72661	0.251902	-1.52832	-2.2537	5.00E-05	0.000948525	yes
CALB2	chr16:71392615-71424342	TTD7PVmother_nt	TTD7PV_nt	OK	0.85589	0.111843	-2.93596	-2.1135	0.00035	0.00513307	yes
CAMK2N1	chr1:20808883-20812728	TTD7PVmother_nt	TTD7PV_nt	OK	29.0848	11.0163	-1.40063	-5.1401	5.00E-05	0.000948525	yes
CBWD5	chr9:70431999-70490177	TTD7PVmother_nt	TTD7PV_nt	OK	2.26483	0.871388	-1.37801	-1.7803	0.00295	0.0286146	yes
CCDC163P	chr1:45959597-45965751	TTD7PVmother_nt	TTD7PV_nt	OK	0.42343	1.37526	1.6995	2.51021	0.00015	0.00249264	yes
CCDC36	chr3:49235860-49295537	TTD7PVmother_nt	TTD7PV_nt	OK	0.30195	0.746126	1.30512	1.73991	0.00215	0.022301	yes
CCDC69	chr5:150560612-150603654	TTD7PVmother_nt	TTD7PV_nt	OK	2.56608	0.988184	-1.37671	-2.9521	5.00E-05	0.000948525	yes
CCDC81	chr11:86085777-86134151	TTD7PVmother_nt	TTD7PV_nt	OK	0.46522	0.127356	-1.86905	-1.9112	0.0011	0.0129681	yes
CCL2	chr17:32582295-32584220	TTD7PVmother_nt	TTD7PV_nt	OK	7.36439	3.03045	-1.28104	-3.2164	0.00025	0.00388815	yes
CCND2	chr12:4382901-4414522	TTD7PVmother_nt	TTD7PV_nt	OK	0.23144	0.556157	1.26483	2.18653	0.00075	0.0095227	yes
CCR7	chr17:38710021-38721736	TTD7PVmother_nt	TTD7PV_nt	OK	1.00871	0.194057	-2.37795	-3.4142	5.00E-05	0.000948525	yes
CD36	chr7:80231503-80308593	TTD7PVmother_nt	TTD7PV_nt	OK	6.3876	0.914468	-2.80427	-4.796	5.00E-05	0.000948525	yes
CD82	chr11:44587140-44641315	TTD7PVmother_nt	TTD7PV_nt	OK	5.03004	1.74267	-1.52927	-2.9092	5.00E-05	0.000948525	yes

CDA	chr1:20915443-20945400	TTD7PVmother_nt	TTD7PV_nt	OK	12.589	2.91873	-2.10875	-5.4533	5.00E-05	0.000948525	yes
CDCA7	chr2:174219560-174233718	TTD7PVmother_nt	TTD7PV_nt	OK	0.59876	1.83352	1.61456	2.77073	5.00E-05	0.000948525	yes
CDH10	chr5:24487208-24645085	TTD7PVmother_nt	TTD7PV_nt	OK	3.28203	6.77509	1.04565	2.97033	5.00E-05	0.000948525	yes
CDH18	chr5:19473154-19988353	TTD7PVmother_nt	TTD7PV_nt	OK	1.45629	9.18302	2.65667	6.04369	5.00E-05	0.000948525	yes
CDH4	chr20:59827481-60515673	TTD7PVmother_nt	TTD7PV_nt	OK	2.79722	1.25642	-1.15468	-2.7825	5.00E-05	0.000948525	yes
CDH6	chr5:31193761-31329253	TTD7PVmother_nt	TTD7PV_nt	OK	0.66599	2.03423	1.6109	3.96251	5.00E-05	0.000948525	yes
CDK15	chr2:202671151-202760273	TTD7PVmother_nt	TTD7PV_nt	OK	0.8295	2.38425	1.52323	2.82913	0.0001	0.00172182	yes
CDS1	chr4:85504056-85572493	TTD7PVmother_nt	TTD7PV_nt	OK	0.53668	0.065989	-3.02376	-4.0428	5.00E-05	0.000948525	yes
CECR7	chr22:17517459-17539682	TTD7PVmother_nt	TTD7PV_nt	OK	0.55273	2.23654	2.01662	3.84784	5.00E-05	0.000948525	yes
CERS4	chr19:8274216-8327304	TTD7PVmother_nt	TTD7PV_nt	OK	2.69036	0.780945	-1.78451	-3.4279	5.00E-05	0.000948525	yes
CES4A	chr16:67022491-67043659	TTD7PVmother_nt	TTD7PV_nt	OK	1.98359	0.982135	-1.01412	-1.7147	0.00205	0.0214716	yes
CFI	chr4:110661847-110723335	TTD7PVmother_nt	TTD7PV_nt	OK	0.42526	1.09663	1.36667	2.23059	0.0012	0.0139552	yes
CH25H	chr10:90965693-90967071	TTD7PVmother_nt	TTD7PV_nt	OK	14.9136	30.3392	1.02455	3.91788	5.00E-05	0.000948525	yes
CHAC1	chr15:41245635-41248717	TTD7PVmother_nt	TTD7PV_nt	OK	8.68205	27.84	1.68105	4.58349	5.00E-05	0.000948525	yes
CHL1	chr3:238278-451097	TTD7PVmother_nt	TTD7PV_nt	OK	0.44263	0.114316	-1.95307	-2.6321	5.00E-05	0.000948525	yes
CHST7	chrX:46433191-46457838	TTD7PVmother_nt	TTD7PV_nt	OK	6.43257	3.0667	-1.06871	-3.0743	0.00015	0.00249264	yes
CLCA2	chr1:86889768-86922240	TTD7PVmother_nt	TTD7PV_nt	OK	0.67353	0.197431	-1.7704	-2.5906	0.00035	0.00513307	yes
CLCN4	chrX:10124984-10205699	TTD7PVmother_nt	TTD7PV_nt	OK	0.62443	0.214198	-1.5436	-2.6697	0.0001	0.00172182	yes
CLDN23	chr8:8559665-8561617	TTD7PVmother_nt	TTD7PV_nt	OK	3.27022	0.522449	-2.64603	-5.0486	5.00E-05	0.000948525	yes
CLDN4	chr7:73245192-73247015	TTD7PVmother_nt	TTD7PV_nt	OK	0.81883	0.311567	-1.39401	-2.104	0.00435	0.0390438	yes
CLEC3B	chr3:45067758-45077563	TTD7PVmother_nt	TTD7PV_nt	OK	34.55	10.4169	-1.72977	-5.793	5.00E-05	0.000948525	yes
CLGN	chr4:141309606-141348815	TTD7PVmother_nt	TTD7PV_nt	OK	2.56585	13.5332	2.39899	5.83929	5.00E-05	0.000948525	yes
CLIC3	chr9:139889059-139891024	TTD7PVmother_nt	TTD7PV_nt	OK	31.8148	7.48328	-2.08795	-7.108	5.00E-05	0.000948525	yes
CLU	chr8:27454433-27472328	TTD7PVmother_nt	TTD7PV_nt	OK	344.09	118.737	-1.53501	-3.7274	5.00E-05	0.000948525	yes
CNN1	chr19:11649578-11661138	TTD7PVmother_nt	TTD7PV_nt	OK	22.9943	7.63078	-1.59137	-4.3846	5.00E-05	0.000948525	yes
COL11A1	chr1:103342022-103574052	TTD7PVmother_nt	TTD7PV_nt	OK	14.7031	0.846683	-4.11816	-7.3698	5.00E-05	0.000948525	yes
COL14A1	chr8:121137346-121384273	TTD7PVmother_nt	TTD7PV_nt	OK	3.4144	10.2403	1.58455	4.67038	5.00E-05	0.000948525	yes
COL4A1	chr13:110801309-110959496	TTD7PVmother_nt	TTD7PV_nt	OK	34.1671	3.91867	-3.12417	-7.3083	5.00E-05	0.000948525	yes
COL4A2	chr13:110959630-111165373	TTD7PVmother_nt	TTD7PV_nt	OK	60.2319	9.98011	-2.5934	-5.7561	5.00E-05	0.000948525	yes
COL6A6	chr3:130279177-130395888	TTD7PVmother_nt	TTD7PV_nt	OK	1.14186	0.45368	-1.33163	-2.75	5.00E-05	0.000948525	yes
COL7A1	chr3:48601505-48632593	TTD7PVmother_nt	TTD7PV_nt	OK	2.4294	0.746804	-1.7018	-4.046	5.00E-05	0.000948525	yes
COMP	chr19:18893582-18902114	TTD7PVmother_nt	TTD7PV_nt	OK	135.057	60.7699	-1.15214	-2.4081	0.00015	0.00249264	yes
CORO6	chr17:27920526-27948441	TTD7PVmother_nt	TTD7PV_nt	OK	4.14278	1.4819	-1.48315	-2.0551	0.0019	0.02013	yes

CPA3	chr3:148583042-148614872	TTD7PVmother_nt	TTD7PV_nt	OK	0.07397	0.967993	3.71005	3.93991	0.00155	0.0171863	yes
CPB1	chr3:148545587-148577972	TTD7PVmother_nt	TTD7PV_nt	OK	0.08463	1.93174	4.51253	4.26636	0.0024	0.0244215	yes
CPM	chr12:69244955-69357020	TTD7PVmother_nt	TTD7PV_nt	OK	1.73624	0.662403	-1.39019	-3.13	5.00E-05	0.000948525	yes
CPN2	chr3:194060493-194072057	TTD7PVmother_nt	TTD7PV_nt	OK	0.56001	0.078647	-2.83201	-3.3544	5.00E-05	0.000948525	yes
CPXM2	chr10:125505151-125651500	TTD7PVmother_nt	TTD7PV_nt	OK	4.99303	1.04124	-2.26161	-4.9264	5.00E-05	0.000948525	yes
CRABP2	chr1:156669399-156675608	TTD7PVmother_nt	TTD7PV_nt	OK	72.6338	266.935	1.87777	5.39787	5.00E-05	0.000948525	yes
CRIP2	chr14:105939274-105946507	TTD7PVmother_nt	TTD7PV_nt	OK	28.1749	13.739	-1.03613	-2.6048	5.00E-05	0.000948525	yes
CRLF1	chr19:18704034-18717660	TTD7PVmother_nt	TTD7PV_nt	OK	83.1419	8.68554	-3.25889	-7.992	5.00E-05	0.000948525	yes
CRYAB	chr11:111779349-111782473	TTD7PVmother_nt	TTD7PV_nt	OK	274.772	98.5091	-1.4799	-7.7406	5.00E-05	0.000948525	yes
CRYZ	chr1:75171171-75232360	TTD7PVmother_nt	TTD7PV_nt	OK	12.7389	3.91353	-1.7027	-3.3054	5.00E-05	0.000948525	yes
CSRP2	chr12:77252495-77272799	TTD7PVmother_nt	TTD7PV_nt	OK	44.5854	13.6696	-1.7056	-5.6173	5.00E-05	0.000948525	yes
CTH	chr1:70876900-70905534	TTD7PVmother_nt	TTD7PV_nt	OK	4.41625	10.3361	1.2268	3.28535	5.00E-05	0.000948525	yes
CTSK	chr1:150768683-150780917	TTD7PVmother_nt	TTD7PV_nt	OK	712.749	327.212	-1.12317	-2.469	0.00045	0.0062912	yes
CTXN1	chr19:7989380-7991051	TTD7PVmother_nt	TTD7PV_nt	OK	8.609	3.71804	-1.2113	-3.4387	5.00E-05	0.000948525	yes
CXCL1	chr4:74735108-74737019	TTD7PVmother_nt	TTD7PV_nt	OK	3.51809	0.981654	-1.84151	-2.7502	0.0001	0.00172182	yes
CXCL6	chr4:74702272-74704477	TTD7PVmother_nt	TTD7PV_nt	OK	3.19423	1.40562	-1.18426	-2.7146	0.0011	0.0129681	yes
CYGB	chr17:74523429-74541458	TTD7PVmother_nt	TTD7PV_nt	OK	22.3502	10.4611	-1.09525	-3.5601	5.00E-05	0.000948525	yes
CYP26B1	chr2:72356366-72374963	TTD7PVmother_nt	TTD7PV_nt	OK	1.59336	5.02609	1.65736	4.47667	5.00E-05	0.000948525	yes
CYP2E1	chr10:135340866-135352620	TTD7PVmother_nt	TTD7PV_nt	OK	1.9899	0.599875	-1.72996	-3.0582	5.00E-05	0.000948525	yes
CYTL1	chr4:5016313-5021197	TTD7PVmother_nt	TTD7PV_nt	OK	1.25208	4.68433	1.90352	3.95483	5.00E-05	0.000948525	yes
DAAM2	chr6:39760158-39902290	TTD7PVmother_nt	TTD7PV_nt	OK	8.56527	3.39168	-1.3365	-3.2107	5.00E-05	0.000948525	yes
DAPK1	chr9:90112755-90323549	TTD7PVmother_nt	TTD7PV_nt	OK	4.81503	0.611299	-2.97759	-6.8861	5.00E-05	0.000948525	yes
DBC1	chr9:121928907-122131739	TTD7PVmother_nt	TTD7PV_nt	OK	5.3907	0.825721	-2.70675	-5.9132	5.00E-05	0.000948525	yes
DBNDD1	chr16:90071278-90085937	TTD7PVmother_nt	TTD7PV_nt	OK	0.72038	0.135836	-2.40689	-2.5829	0.00025	0.00388815	yes
DDIT4	chr10:74033676-74035797	TTD7PVmother_nt	TTD7PV_nt	OK	46.8775	99.0263	1.07892	3.93441	5.00E-05	0.000948525	yes
DDIT4L	chr4:101107026-101111655	TTD7PVmother_nt	TTD7PV_nt	OK	5.47108	1.2914	-2.08289	-5.106	5.00E-05	0.000948525	yes
DENND3	chr8:142138719-142205900	TTD7PVmother_nt	TTD7PV_nt	OK	3.94055	0.81117	-2.28032	-5.3745	5.00E-05	0.000948525	yes
DISP2	chr15:40650433-40663256	TTD7PVmother_nt	TTD7PV_nt	OK	2.4441	1.06526	-1.1981	-2.8641	5.00E-05	0.000948525	yes
DLX1	chr2:172950207-172954401	TTD7PVmother_nt	TTD7PV_nt	OK	1.79086	0.296874	-2.59273	-3.6902	5.00E-05	0.000948525	yes
DLX2	chr2:172964165-172967478	TTD7PVmother_nt	TTD7PV_nt	OK	3.10555	1.47325	-1.07585	-2.5047	0.0012	0.0139552	yes
DNAJC6	chr1:65730376-65881552	TTD7PVmother_nt	TTD7PV_nt	OK	1.49502	0.593283	-1.33337	-2.7579	5.00E-05	0.000948525	yes
DOCK4	chr7:111366163-111846462	TTD7PVmother_nt	TTD7PV_nt	OK	0.87389	0.192187	-2.18494	-4.0353	5.00E-05	0.000948525	yes
DPP4	chr2:162848754-162931052	TTD7PVmother_nt	TTD7PV_nt	OK	158.739	20.3205	-2.96565	-8.39	5.00E-05	0.000948525	yes

Gene	Location	Sample1	Sample2	Status	Val1	Val2	Val3	Val4	pval	qval	sig
DPYSL4	chr10:134000413-134019280	TTD7PVmother_nt	TTD7PV_nt	OK	1.13919	3.48638	1.61372	3.49036	5.00E-05	0.000948525	yes
DSG2	chr18:29078026-29136874	TTD7PVmother_nt	TTD7PV_nt	OK	0.61223	0.171982	-1.83182	-2.5039	0.00045	0.0062912	yes
DSP	chr6:7541869-7586946	TTD7PVmother_nt	TTD7PV_nt	OK	29.8184	9.18863	-1.69828	-4.8208	5.00E-05	0.000948525	yes
DUSP4	chr8:29190578-29208267	TTD7PVmother_nt	TTD7PV_nt	OK	4.72581	0.344437	-3.77825	-7.5601	5.00E-05	0.000948525	yes
DYNC1I1	chr7:95401817-95727736	TTD7PVmother_nt	TTD7PV_nt	OK	1.01322	0.153909	-2.71881	-3.4253	5.00E-05	0.000948525	yes
DYSF	chr2:71680752-71913893	TTD7PVmother_nt	TTD7PV_nt	OK	0.45991	0.129289	-1.83075	-2.1849	5.00E-05	0.000948525	yes
EBF2	chr8:25699245-25902640	TTD7PVmother_nt	TTD7PV_nt	OK	1.20091	0.028016	-5.42175	-5.1294	0.00035	0.00513307	yes
EBF3	chr10:131633495-131762091	TTD7PVmother_nt	TTD7PV_nt	OK	5.0608	1.81102	-1.48256	-3.8887	5.00E-05	0.000948525	yes
ECHDC3	chr10:11784355-11806065	TTD7PVmother_nt	TTD7PV_nt	OK	0.7219	0.110715	-2.70494	-3.0776	0.00165	0.0180615	yes
EDIL3	chr5:83238125-83680611	TTD7PVmother_nt	TTD7PV_nt	OK	45.0334	7.21128	-2.64267	-6.8854	5.00E-05	0.000948525	yes
EFCAB4B	chr12:3724493-3862366	TTD7PVmother_nt	TTD7PV_nt	OK	1.12684	0.186466	-2.5953	-2.9131	0.0001	0.00172182	yes
EGR1	chr5:137801180-137805004	TTD7PVmother_nt	TTD7PV_nt	OK	8.55274	17.8459	1.06114	3.27667	5.00E-05	0.000948525	yes
EGR2	chr10:64571755-64578927	TTD7PVmother_nt	TTD7PV_nt	OK	0.69504	1.66247	1.25816	2.01344	0.0005	0.00687807	yes
ELFN2	chr22:37763999-37823505	TTD7PVmother_nt	TTD7PV_nt	OK	0.24343	0.568221	1.22297	2.20873	0.0003	0.00450245	yes
ELN	chr7:73442426-73484236	TTD7PVmother_nt	TTD7PV_nt	OK	330.566	485.13	1.44845	1.12473	5.00E-05	0.000948525	yes
ELOVL2	chr6:10980992-11079377	TTD7PVmother_nt	TTD7PV_nt	OK	0.24348	0.633873	1.38039	2.25727	0.0013	0.0149558	yes
ENO3	chr17:4854383-4860426	TTD7PVmother_nt	TTD7PV_nt	OK	1.79051	0.804988	-1.15333	-1.6543	0.00305	0.0293851	yes
ENPP5	chr6:46127761-46138717	TTD7PVmother_nt	TTD7PV_nt	OK	3.12085	1.23118	-1.3419	-2.9847	5.00E-05	0.000948525	yes
EPB41L4A	chr5:111498314-111755010	TTD7PVmother_nt	TTD7PV_nt	OK	1.75277	0.854328	-1.03677	-2.3018	0.00065	0.00852222	yes
EPDR1	chr7:37960162-37991542	TTD7PVmother_nt	TTD7PV_nt	OK	22.1785	1.59463	-3.79787	-8.5424	5.00E-05	0.000948525	yes
EPHA3	chr3:89156673-89531284	TTD7PVmother_nt	TTD7PV_nt	OK	0.08648	0.596553	2.78626	3.47021	5.00E-05	0.000948525	yes
EPS8L2	chr11:706119-727727	TTD7PVmother_nt	TTD7PV_nt	OK	28.8343	13.8637	-1.05648	-3.5951	5.00E-05	0.000948525	yes
ERG	chr21:39739182-40033704	TTD7PVmother_nt	TTD7PV_nt	OK	1.16225	0.383374	-1.6001	-2.1327	0.00045	0.0062912	yes
ESPNL	chr2:239008950-239041928	TTD7PVmother_nt	TTD7PV_nt	OK	0.07623	0.814007	3.41667	4.52478	5.00E-05	0.000948525	yes
ESYT3	chr3:138153414-138197256	TTD7PVmother_nt	TTD7PV_nt	OK	0.76643	0.133506	-2.52124	-3.7738	5.00E-05	0.000948525	yes
ETNK2	chr1:204100189-204121307	TTD7PVmother_nt	TTD7PV_nt	OK	1.62395	0.563316	-1.5275	-2.7877	0.00015	0.00249264	yes
EVA1C	chr21:33784751-33887697	TTD7PVmother_nt	TTD7PV_nt	OK	0.82263	0.270863	-1.60268	-2.3795	0.00145	0.0163452	yes
EXO1	chr1:242011492-242053241	TTD7PVmother_nt	TTD7PV_nt	OK	0.80478	2.00504	1.31697	2.41495	5.00E-05	0.000948525	yes
EXTL1	chr1:26348270-26362954	TTD7PVmother_nt	TTD7PV_nt	OK	0.68811	0.130555	-2.39798	-3.5431	5.00E-05	0.000948525	yes
F10	chr13:113777112-113803843	TTD7PVmother_nt	TTD7PV_nt	OK	4.15645	0.87785	-2.2433	-4.3793	5.00E-05	0.000948525	yes
F2R	chr5:76011867-76031595	TTD7PVmother_nt	TTD7PV_nt	OK	8.08084	19.4563	1.26766	4.54155	5.00E-05	0.000948525	yes
F3	chr1:94994731-95007413	TTD7PVmother_nt	TTD7PV_nt	OK	58.6861	9.91232	-2.56572	-7.4586	5.00E-05	0.000948525	yes
F8	chrX:154064063-154250998	TTD7PVmother_nt	TTD7PV_nt	OK	3.73823	1.26515	-1.56305	-2.7059	0.0004	0.00575481	yes

FABP3	chr1:31838099-31845923	TTD7PVmother_nt	TTD7PV_nt	OK	15.8683	6.80987	-1.22045	-3.5838	0.0001	0.00172182	yes
FABP5	chr8:82192717-82197012	TTD7PVmother_nt	TTD7PV_nt	OK	4.32899	16.3202	1.91455	5.31511	5.00E-05	0.000948525	yes
FAM134B	chr5:16473146-16617167	TTD7PVmother_nt	TTD7PV_nt	OK	2.42536	0.174333	-3.79828	-5.5192	5.00E-05	0.000948525	yes
FAM149A	chr4:187065994-187093817	TTD7PVmother_nt	TTD7PV_nt	OK	2.43738	1.13153	-1.10706	-2.0676	0.00045	0.0062912	yes
FAM155A	chr13:107820878-108519460	TTD7PVmother_nt	TTD7PV_nt	OK	3.50781	1.06672	-1.71739	-4.0547	5.00E-05	0.000948525	yes
FAM19A5	chr22:48885287-49147744	TTD7PVmother_nt	TTD7PV_nt	OK	21.6462	10.6161	-1.02786	-3.1596	5.00E-05	0.000948525	yes
FAM43B	chr1:20878931-20881513	TTD7PVmother_nt	TTD7PV_nt	OK	0.67802	0.110027	-2.62348	-3.4369	0.0001	0.00172182	yes
FAM65C	chr20:49202646-49253426	TTD7PVmother_nt	TTD7PV_nt	OK	1.07887	0.255146	-2.08013	-3.4015	5.00E-05	0.000948525	yes
FBLN7	chr2:112895961-112945791	TTD7PVmother_nt	TTD7PV_nt	OK	7.07365	3.53253	-1.00175	-2.4981	5.00E-05	0.000948525	yes
FBN2	chr5:127593600-127873735	TTD7PVmother_nt	TTD7PV_nt	OK	4.36478	28.6774	2.71593	7.81743	5.00E-05	0.000948525	yes
FBXL2	chr3:33318933-33428757	TTD7PVmother_nt	TTD7PV_nt	OK	1.85312	0.400837	-2.20887	-3.6816	5.00E-05	0.000948525	yes
FBXO32	chr8:124510126-124553493	TTD7PVmother_nt	TTD7PV_nt	OK	9.85312	3.10949	-1.6639	-4.9855	5.00E-05	0.000948525	yes
FBXO41	chr2:73481809-73496758	TTD7PVmother_nt	TTD7PV_nt	OK	0.89862	0.149706	-2.58557	-4.4417	5.00E-05	0.000948525	yes
FERMT1	chr20:6055491-6104191	TTD7PVmother_nt	TTD7PV_nt	OK	0.62334	1.27602	1.03356	2.14204	0.00065	0.00852222	yes
FGD4	chr12:32655040-32798984	TTD7PVmother_nt	TTD7PV_nt	OK	1.31883	0.577728	-1.1908	-2.7695	5.00E-05	0.000948525	yes
FGF1	chr5:141971742-142077635	TTD7PVmother_nt	TTD7PV_nt	OK	5.14346	1.67153	-1.62157	-3.878	5.00E-05	0.000948525	yes
FGF18	chr5:170846666-170884630	TTD7PVmother_nt	TTD7PV_nt	OK	0.33966	0.84662	1.31764	1.87711	0.00545	0.0464532	yes
FGF7	chr15:49447975-49913118	TTD7PVmother_nt	TTD7PV_nt	OK	92.1881	44.8865	-1.0383	-3.2678	5.00E-05	0.000948525	yes
FGFR3	chr4:1795038-1810599	TTD7PVmother_nt	TTD7PV_nt	OK	0.46864	1.08816	1.21532	2.06754	0.0006	0.00798882	yes
FGL2	chr7:76751933-76924521	TTD7PVmother_nt	TTD7PV_nt	OK	3.75638	10.8943	1.53615	4.16542	5.00E-05	0.000948525	yes
FIBCD1	chr9:133777824-133814455	TTD7PVmother_nt	TTD7PV_nt	OK	1.14477	0.507702	-1.173	-1.9871	0.00115	0.0134589	yes
FIBIN	chr11:27015627-27018632	TTD7PVmother_nt	TTD7PV_nt	OK	9.56169	21.3313	1.15763	3.96774	5.00E-05	0.000948525	yes
FKBP1B	chr2:24272583-24286550	TTD7PVmother_nt	TTD7PV_nt	OK	4.34164	1.9867	-1.12786	-1.8007	0.00185	0.0197466	yes
FKBP9L	chr7:55748766-55772260	TTD7PVmother_nt	TTD7PV_nt	OK	7.75303	3.37197	-1.20117	-2.9706	5.00E-05	0.000948525	yes
FLG	chr1:152274650-152297679	TTD7PVmother_nt	TTD7PV_nt	OK	0.7926	0.10417	-2.92766	-4.3205	5.00E-05	0.000948525	yes
FLJ46906	chr6:139012804-139018425	TTD7PVmother_nt	TTD7PV_nt	OK	1.09233	2.95931	1.43785	2.88687	0.00105	0.0124816	yes
FLRT3	chr20:13976145-16033841	TTD7PVmother_nt	TTD7PV_nt	OK	1.33228	2.7221	1.03082	2.27126	0.0011	0.0129681	yes
FMNL1	chr17:43299291-43324683	TTD7PVmother_nt	TTD7PV_nt	OK	1.1098	0.424805	-1.38543	-2.5044	5.00E-05	0.000948525	yes
FNDC1	chr6:159590428-159693140	TTD7PVmother_nt	TTD7PV_nt	OK	18.649	8.11799	-1.1999	-3.0466	5.00E-05	0.000948525	yes
FNDC4	chr2:27714749-27718126	TTD7PVmother_nt	TTD7PV_nt	OK	15.6446	7.49226	-1.06219	-3.3563	5.00E-05	0.000948525	yes
FNIP2	chr4:159690181-159956333	TTD7PVmother_nt	TTD7PV_nt	OK	9.28021	4.27143	-1.11944	-3.4489	5.00E-05	0.000948525	yes
FOLR3	chr11:71846770-71850934	TTD7PVmother_nt	TTD7PV_nt	OK	11.7492	3.17852	-1.88613	-4.8334	5.00E-05	0.000948525	yes
FOS	chr14:75745480-75748937	TTD7PVmother_nt	TTD7PV_nt	OK	5.32061	1.82869	-1.54078	-3.5537	5.00E-05	0.000948525	yes

Gene	Location	Sample1	Sample2	Status	Val1	Val2	Val3	Val4	p	q	Sig
FOSB	chr19:45971252-45978437	TTD7PVmother_nt	TTD7PV_nt	OK	1.4398	0.6117	-1.23498	-2.1839	0.0006	0.00798882	yes
FOXL2	chr3:138663065-138665982	TTD7PVmother_nt	TTD7PV_nt	OK	1.92837	0.456671	-2.07815	-4.1549	5.00E-05	0.000948525	yes
FRG1B	chr20:29611878-29634007	TTD7PVmother_nt	TTD7PV_nt	OK	4.34744	9.29883	1.09688	2.90164	0.00035	0.00513307	yes
FRY	chr13:32605436-32870776	TTD7PVmother_nt	TTD7PV_nt	OK	1.06818	0.493409	-1.1143	-2.587	5.00E-05	0.000948525	yes
FZD5	chr2:208627309-208634143	TTD7PVmother_nt	TTD7PV_nt	OK	0.50672	0.230313	-1.13758	-2.029	0.0014	0.015879	yes
GABBR1	chr6_qbl_hap6:873335-904294	TTD7PVmother_nt	TTD7PV_nt	OK	6.49831	3.21517	-1.01517	-2.8882	5.00E-05	0.000948525	yes
GABBR2	chr9:101050363-101471479	TTD7PVmother_nt	TTD7PV_nt	OK	2.47851	0.631132	-1.97346	-4.3226	5.00E-05	0.000948525	yes
GABRA5	chr15:27111865-27194357	TTD7PVmother_nt	TTD7PV_nt	OK	0.77418	0.065732	-3.55799	-3.3644	0.0001	0.00172182	yes
GAD1	chr2:171673199-171717659	TTD7PVmother_nt	TTD7PV_nt	OK	0.78489	0.106087	-2.88724	-2.8257	5.00E-05	0.000948525	yes
GALNT14	chr2:31133330-31361592	TTD7PVmother_nt	TTD7PV_nt	OK	0.28737	2.28792	2.99304	4.19609	5.00E-05	0.000948525	yes
GALNT15	chr3:16216183-16271253	TTD7PVmother_nt	TTD7PV_nt	OK	15.3855	4.66169	-1.72265	-5.453	5.00E-05	0.000948525	yes
GALNT5	chr2:158114339-158167913	TTD7PVmother_nt	TTD7PV_nt	OK	33.5112	80.1815	1.25863	3.6449	5.00E-05	0.000948525	yes
GALNT6	chr12:51745832-51909547	TTD7PVmother_nt	TTD7PV_nt	OK	3.28416	1.37237	-1.25885	-2.2769	0.00075	0.0095227	yes
GAS5	chr1:173832385-173837125	TTD7PVmother_nt	TTD7PV_nt	OK	169.473	339.352	1.00172	3.0252	5.00E-05	0.000948525	yes
GAS6	chr13:114518582-114567046	TTD7PVmother_nt	TTD7PV_nt	OK	790.21	244.887	-1.69012	-3.4674	5.00E-05	0.000948525	yes
GATS	chr7:99775537-99869855	TTD7PVmother_nt	TTD7PV_nt	OK	4.84721	2.36445	-1.03565	-2.6865	5.00E-05	0.000948525	yes
GCNT3	chr15:59903981-59912210	TTD7PVmother_nt	TTD7PV_nt	OK	0.5245	0.058238	-3.17092	-2.9862	0.00215	0.022301	yes
GCNT4	chr5:74323288-74326724	TTD7PVmother_nt	TTD7PV_nt	OK	1.86851	0.567581	-1.71899	-3.5028	5.00E-05	0.000948525	yes
GDF10	chr10:48425787-48439138	TTD7PVmother_nt	TTD7PV_nt	OK	0.93047	1.8903	1.02258	2.05052	0.0026	0.0259234	yes
GDF15	chr19:18496967-18499986	TTD7PVmother_nt	TTD7PV_nt	OK	30.3155	14.4804	-1.06595	-3.0808	5.00E-05	0.000948525	yes
GDF5	chr20:34021148-34026027	TTD7PVmother_nt	TTD7PV_nt	OK	10.3226	4.48364	-1.20306	-3.3653	5.00E-05	0.000948525	yes
GFRA1	chr10:117816441-118033126	TTD7PVmother_nt	TTD7PV_nt	OK	2.18869	5.36296	1.29296	3.79526	5.00E-05	0.000948525	yes
GGT5	chr22:24615621-24641110	TTD7PVmother_nt	TTD7PV_nt	OK	0.81188	0.210002	-1.95087	-2.4624	0.00025	0.00388815	yes
GJA3	chr13:20712394-20735183	TTD7PVmother_nt	TTD7PV_nt	OK	1.23498	0.337241	-1.87264	-3.6555	5.00E-05	0.000948525	yes
GNAZ	chr22:23401592-23484241	TTD7PVmother_nt	TTD7PV_nt	OK	1.07589	0.088071	-3.61072	-4.2171	5.00E-05	0.000948525	yes
GNG11	chr7:93551015-93555826	TTD7PVmother_nt	TTD7PV_nt	OK	75.7119	33.454	-1.17834	-4.8927	5.00E-05	0.000948525	yes
GOLGA6L4	chr15:84904524-84914120	TTD7PVmother_nt	TTD7PV_nt	OK	0.6362	0.233077	-1.44868	-2.3444	0.00075	0.0095227	yes
GPC3	chrX:132669775-133119673	TTD7PVmother_nt	TTD7PV_nt	OK	0.16337	0.469677	1.52351	1.63877	0.0026	0.0259234	yes
GPR155	chr2:175296299-175351816	TTD7PVmother_nt	TTD7PV_nt	OK	0.76518	0.332918	-1.20063	-2.3408	0.00025	0.00388815	yes
GPR68	chr14:91698875-91720224	TTD7PVmother_nt	TTD7PV_nt	OK	16.4743	7.05667	-1.22315	-3.4787	5.00E-05	0.000948525	yes
GPRC5A	chr12:13043955-13066600	TTD7PVmother_nt	TTD7PV_nt	OK	6.44185	3.14992	-1.03216	-2.8608	5.00E-05	0.000948525	yes
GPRC5B	chr16:19870292-19896151	TTD7PVmother_nt	TTD7PV_nt	OK	5.55768	2.42361	-1.19732	-3.1391	5.00E-05	0.000948525	yes
GPX3	chr5:150399998-150408554	TTD7PVmother_nt	TTD7PV_nt	OK	18.8528	0.849734	-4.47162	-9.2642	5.00E-05	0.000948525	yes

Gene	Location	Sample1	Sample2	Status	Val1	Val2	Val3	Val4	p1	p2	sig
GRHL1	chr2:10091791-10142412	TTD7PVmother_nt	TTD7PV_nt	OK	0.84176	0.122426	-2.7815	-3.9663	5.00E-05	0.000948525	yes
GRID1	chr10:87337487-88126250	TTD7PVmother_nt	TTD7PV_nt	OK	0.79508	0.06696	-3.56972	-4.7202	5.00E-05	0.000948525	yes
GRIK2	chr6:101846860-102517958	TTD7PVmother_nt	TTD7PV_nt	OK	3.39195	0.147772	-4.52067	-7.3383	5.00E-05	0.000948525	yes
GRIN3A	chr9:104331633-104500862	TTD7PVmother_nt	TTD7PV_nt	OK	0.17057	1.43853	3.07616	5.47472	5.00E-05	0.000948525	yes
GSTM5	chr1:110254863-110260890	TTD7PVmother_nt	TTD7PV_nt	OK	0.53712	2.41042	2.16597	3.79535	5.00E-05	0.000948525	yes
GYPC	chr2:127413510-127454251	TTD7PVmother_nt	TTD7PV_nt	OK	41.8647	16.8023	-1.31707	-3.7814	5.00E-05	0.000948525	yes
H19	chr11:2016405-2019065	TTD7PVmother_nt	TTD7PV_nt	OK	0.85793	9.55947	3.478	6.12481	5.00E-05	0.000948525	yes
HAND2	chr4:174447651-174451378	TTD7PVmother_nt	TTD7PV_nt	OK	10.4133	1.17257	-3.15068	-7.5887	5.00E-05	0.000948525	yes
HAPLN1	chr5:82934016-83016896	TTD7PVmother_nt	TTD7PV_nt	OK	23.8686	1.23576	-4.27164	-9.3513	5.00E-05	0.000948525	yes
HAPLN3	chr15:89420518-89438770	TTD7PVmother_nt	TTD7PV_nt	OK	16.1395	4.21032	-1.93859	-5.8527	5.00E-05	0.000948525	yes
HECW1	chr7:43152197-43602938	TTD7PVmother_nt	TTD7PV_nt	OK	0.63125	0.131808	-2.25978	-3.5354	5.00E-05	0.000948525	yes
HERC2P7	chr15:23390721-23393943	TTD7PVmother_nt	TTD7PV_nt	OK	2.77055	1.15038	-1.26806	-2.7284	0.00035	0.00513307	yes
HHEX	chr10:94449680-94455408	TTD7PVmother_nt	TTD7PV_nt	OK	0.11864	0.582709	2.2962	2.72326	0.00175	0.0188513	yes
HIST1H1C	chr6:26055967-26056699	TTD7PVmother_nt	TTD7PV_nt	OK	35.1128	14.204	-1.3057	-5.0019	5.00E-05	0.000948525	yes
HIST1H4H	chr6:26285353-26285727	TTD7PVmother_nt	TTD7PV_nt	OK	8.48299	2.64361	-1.68207	-6.5777	0.00535	0.0458439	yes
HK2	chr2:75059781-75120481	TTD7PVmother_nt	TTD7PV_nt	OK	11.1967	3.72265	-1.58867	-5.0917	5.00E-05	0.000948525	yes
HOXB7	chr17:46684594-46688383	TTD7PVmother_nt	TTD7PV_nt	OK	15.2452	7.61603	-1.00124	-3.1624	5.00E-05	0.000948525	yes
HOXB8	chr17:46689707-46692301	TTD7PVmother_nt	TTD7PV_nt	OK	7.69321	0.418615	-4.19989	-8.0846	5.00E-05	0.000948525	yes
HOXB9	chr17:46698518-46703835	TTD7PVmother_nt	TTD7PV_nt	OK	0.72046	0.041774	-4.10824	-3.534	0.0015	0.0167911	yes
HOXC10	chr12:54378945-54384062	TTD7PVmother_nt	TTD7PV_nt	OK	24.8345	0.110238	-7.81558	-10.045	5.00E-05	0.000948525	yes
HOXC9	chr12:54393876-54397120	TTD7PVmother_nt	TTD7PV_nt	OK	16.7038	4.74321	-1.81625	-5.4818	5.00E-05	0.000948525	yes
HR	chr8:21971931-21988565	TTD7PVmother_nt	TTD7PV_nt	OK	0.63745	0.299397	-1.09026	-1.8021	0.0022	0.0226734	yes
HS3ST2	chr16:22825859-22927659	TTD7PVmother_nt	TTD7PV_nt	OK	0.80584	0.106895	-2.91429	-3.4516	0.0003	0.00450245	yes
HS3ST3B1	chr17:14204505-14249492	TTD7PVmother_nt	TTD7PV_nt	OK	5.86224	2.7203	-1.10768	-2.5585	0.0005	0.00687807	yes
HSD11B1	chr1:209859524-209908295	TTD7PVmother_nt	TTD7PV_nt	OK	1.48208	0.442339	-1.7444	-2.2227	0.0003	0.00450245	yes
HSD17B14	chr19:49316273-49339934	TTD7PVmother_nt	TTD7PV_nt	OK	24.1979	11.7447	-1.04287	-3.4888	5.00E-05	0.000948525	yes
HSD3B7	chr16:30996518-31000473	TTD7PVmother_nt	TTD7PV_nt	OK	35.2424	14.3694	-1.29432	-3.9217	5.00E-05	0.000948525	yes
HSPA2	chr14:65007185-65009954	TTD7PVmother_nt	TTD7PV_nt	OK	16.4141	4.16409	-1.97886	-5.6697	5.00E-05	0.000948525	yes
HSPA6	chr1:161494035-161496687	TTD7PVmother_nt	TTD7PV_nt	OK	2.19264	0.068981	-4.99032	-5.5803	5.00E-05	0.000948525	yes
HSPB7	chr1:16340522-16345285	TTD7PVmother_nt	TTD7PV_nt	OK	257.096	116.842	-1.13775	-3.0822	5.00E-05	0.000948525	yes
HSPB8	chr12:119616594-119632551	TTD7PVmother_nt	TTD7PV_nt	OK	20.0821	7.49902	-1.42113	-4.7157	5.00E-05	0.000948525	yes
HTR2A	chr13:47405676-47471211	TTD7PVmother_nt	TTD7PV_nt	OK	0.80671	0.218805	-1.8824	-3.2202	5.00E-05	0.000948525	yes
HTRA3	chr4:8271488-8308838	TTD7PVmother_nt	TTD7PV_nt	OK	23.0782	56.3384	1.28759	4.40009	5.00E-05	0.000948525	yes

ICAM1	chr19:10381516-10397291	TTD7PVmother_nt	TTD7PV_nt	OK	6.9936	1.5962	-2.13139	-5.2844	5.00E-05	0.000948525	yes
ICAM5	chr19:10400654-10407454	TTD7PVmother_nt	TTD7PV_nt	OK	1.00979	0.25328	-1.99524	-3.1213	5.00E-05	0.000948525	yes
IFI44	chr1:79115476-79129763	TTD7PVmother_nt	TTD7PV_nt	OK	1.944	4.09734	1.07566	2.44	0.00095	0.0115056	yes
IFIT1	chr10:91152302-91166244	TTD7PVmother_nt	TTD7PV_nt	OK	5.69403	2.44214	-1.22131	-3.2587	5.00E-05	0.000948525	yes
IGDCC4	chr15:65673824-65715410	TTD7PVmother_nt	TTD7PV_nt	OK	0.56032	3.17095	2.5006	5.72842	5.00E-05	0.000948525	yes
IGF2BP1	chr17:47074773-47133507	TTD7PVmother_nt	TTD7PV_nt	OK	0.54057	1.21823	1.17224	2.53895	0.0001	0.00172182	yes
IGFBP2	chr2:217498126-217529158	TTD7PVmother_nt	TTD7PV_nt	OK	0.94005	4.74227	2.33478	4.75606	5.00E-05	0.000948525	yes
IGFBP4	chr17:38599675-38613982	TTD7PVmother_nt	TTD7PV_nt	OK	768.21	345.982	-1.1508	-2.8211	0.0001	0.00172182	yes
IGFBP5	chr2:217536827-217560272	TTD7PVmother_nt	TTD7PV_nt	OK	9.36631	3.53405	-1.40616	-4.1278	5.00E-05	0.000948525	yes
IGSF10	chr3:150804675-151176497	TTD7PVmother_nt	TTD7PV_nt	OK	1.18269	4.85776	2.03822	3.98113	5.00E-05	0.000948525	yes
IL13RA2	chrX:114238537-114252207	TTD7PVmother_nt	TTD7PV_nt	OK	56.0154	8.62458	-2.6993	-8.8586	5.00E-05	0.000948525	yes
IL15	chr4:142557748-142655140	TTD7PVmother_nt	TTD7PV_nt	OK	0.87927	0.328271	-1.42142	-2.035	0.0023	0.0235343	yes
IL18R1	chr2:102979096-103015217	TTD7PVmother_nt	TTD7PV_nt	OK	0.46358	2.20255	2.24828	4.31249	5.00E-05	0.000948525	yes
IL1RL1	chr2:102927961-102968497	TTD7PVmother_nt	TTD7PV_nt	OK	2.3623	16.3689	2.79269	6.4427	5.00E-05	0.000948525	yes
IL20RB	chr3:136676706-136729926	TTD7PVmother_nt	TTD7PV_nt	OK	20.1137	4.62504	-2.12064	-6.3401	5.00E-05	0.000948525	yes
IL33	chr9:6215785-6257983	TTD7PVmother_nt	TTD7PV_nt	OK	11.2777	3.21289	-1.81153	-4.5534	5.00E-05	0.000948525	yes
IL6	chr7:22766765-22771621	TTD7PVmother_nt	TTD7PV_nt	OK	5.94034	2.2063	-1.42892	-3.2039	0.00015	0.00249264	yes
IL7	chr8:79645006-79717758	TTD7PVmother_nt	TTD7PV_nt	OK	1.95142	0.934782	-1.06182	-1.827	0.0026	0.0259234	yes
IL7R	chr5:35856976-35879705	TTD7PVmother_nt	TTD7PV_nt	OK	3.70054	7.66083	1.04976	3.15065	5.00E-05	0.000948525	yes
INA	chr10:105036919-105050108	TTD7PVmother_nt	TTD7PV_nt	OK	0.73838	0.235315	-1.64977	-2.6094	0.0003	0.00450245	yes
INMT	chr7:30791750-30932002	TTD7PVmother_nt	TTD7PV_nt	OK	1.83007	0.388244	-2.23686	-2.1953	0.0029	0.028236	yes
IQCA1	chr2:237232789-237416178	TTD7PVmother_nt	TTD7PV_nt	OK	0.62823	0.21043	-1.57796	-2.0788	0.00045	0.0062912	yes
ISG15	chr1:948846-949919	TTD7PVmother_nt	TTD7PV_nt	OK	12.2216	26.0321	1.09086	4.04014	5.00E-05	0.000948525	yes
ISM1	chr20:13202417-13281297	TTD7PVmother_nt	TTD7PV_nt	OK	4.66611	2.22973	-1.06535	-2.2555	0.0001	0.00172182	yes
ITGA10	chr1:145524989-145543868	TTD7PVmother_nt	TTD7PV_nt	OK	0.60548	0.234201	-1.37034	-2.2647	0.0009	0.0110351	yes
ITGA3	chr17:48133339-48167849	TTD7PVmother_nt	TTD7PV_nt	OK	12.1512	5.118	-1.24744	-3.6697	5.00E-05	0.000948525	yes
ITGA7	chr12:56075329-56106089	TTD7PVmother_nt	TTD7PV_nt	OK	8.32793	1.81066	-2.20144	-5.4163	5.00E-05	0.000948525	yes
ITGB3	chr17:45331207-45390077	TTD7PVmother_nt	TTD7PV_nt	OK	18.8729	4.59609	-2.03784	-6.2251	5.00E-05	0.000948525	yes
ITGB8	chr7:20370724-20455382	TTD7PVmother_nt	TTD7PV_nt	OK	2.9509	0.901699	-1.71044	-4.8655	5.00E-05	0.000948525	yes
ITIH5	chr10:7601231-7708961	TTD7PVmother_nt	TTD7PV_nt	OK	0.70628	4.35108	2.62306	5.15285	5.00E-05	0.000948525	yes
ITPR3	chr6:33589155-33664348	TTD7PVmother_nt	TTD7PV_nt	OK	25.8812	8.79843	-1.55659	-4.6488	5.00E-05	0.000948525	yes
IZUMO4	chr19:2096867-2099583	TTD7PVmother_nt	TTD7PV_nt	OK	1.29654	0.375371	-1.78828	-1.8716	0.0027	0.0267134	yes
JAM2	chr21:27011593-27089874	TTD7PVmother_nt	TTD7PV_nt	OK	4.66195	0.913697	-2.35115	-4.2139	5.00E-05	0.000948525	yes

Gene	Location	Sample1	Sample2	Status	Value1	Value2	log2FC	test_stat	p_value	q_value	sig
JPH2	chr20:42740336-42816218	TTD7PVmother_nt	TTD7PV_nt	OK	3.34052	0.45009	-2.89179	-5.3749	5.00E-05	0.000948525	yes
JUP	chr17:39910858-39942964	TTD7PVmother_nt	TTD7PV_nt	OK	4.20622	0.951185	-2.14473	-4.3732	5.00E-05	0.000948525	yes
KALRN	chr3:123813557-124440036	TTD7PVmother_nt	TTD7PV_nt	OK	1.08819	0.303856	-1.84046	-2.7969	5.00E-05	0.000948525	yes
KAZALD1	chr10:102820998-102825351	TTD7PVmother_nt	TTD7PV_nt	OK	7.49039	20.1222	1.42568	4.62469	5.00E-05	0.000948525	yes
KBTBD11	chr8:1922043-1955109	TTD7PVmother_nt	TTD7PV_nt	OK	0.58504	1.88283	1.68629	4.03919	5.00E-05	0.000948525	yes
KCNG1	chr20:49620192-49639675	TTD7PVmother_nt	TTD7PV_nt	OK	4.23946	10.5876	1.32042	3.89811	5.00E-05	0.000948525	yes
KCNJ15	chr21:39601836-39673746	TTD7PVmother_nt	TTD7PV_nt	OK	2.41102	1.019	-1.24249	-2.303	0.0001	0.00172182	yes
KCNJ2-AS1	chr17:68163101-68165543	TTD7PVmother_nt	TTD7PV_nt	OK	0.65415	0.155618	-2.07161	-2.808	0.0006	0.00798882	yes
KCNJ6	chr21:38996784-39288741	TTD7PVmother_nt	TTD7PV_nt	OK	0.68231	0.116013	-2.55614	-3.1889	0.00025	0.00388815	yes
KCNJ8	chr12:21917888-21927755	TTD7PVmother_nt	TTD7PV_nt	OK	9.50187	3.51471	-1.4348	-4.106	5.00E-05	0.000948525	yes
KCNK1	chr1:233749749-233808258	TTD7PVmother_nt	TTD7PV_nt	OK	10.3883	3.21211	-1.69337	-4.2656	5.00E-05	0.000948525	yes
KCNK6	chr19:38810483-38819649	TTD7PVmother_nt	TTD7PV_nt	OK	9.53748	3.76905	-1.33941	-3.8494	5.00E-05	0.000948525	yes
KCNMB4	chr12:70760061-70828072	TTD7PVmother_nt	TTD7PV_nt	OK	0.81503	0.241306	-1.75599	-3.1146	5.00E-05	0.000948525	yes
KCNQ3	chr8:133133104-133493004	TTD7PVmother_nt	TTD7PV_nt	OK	0.56057	0.238229	-1.23455	-2.346	0.0001	0.00172182	yes
KCNS2	chr8:99439249-99443023	TTD7PVmother_nt	TTD7PV_nt	OK	1.00897	0.180936	-2.47933	-3.7207	5.00E-05	0.000948525	yes
KCNS3	chr2:18059944-18114225	TTD7PVmother_nt	TTD7PV_nt	OK	3.2702	1.55555	-1.07195	-2.3839	0.0007	0.00906687	yes
KIAA0226L	chr13:46916136-46961635	TTD7PVmother_nt	TTD7PV_nt	OK	1.04036	0.429272	-1.27712	-2.3359	0.00035	0.00513307	yes
KIAA1161	chr9:34368906-34376894	TTD7PVmother_nt	TTD7PV_nt	OK	0.92017	0.320864	-1.51994	-2.7593	5.00E-05	0.000948525	yes
KIAA1211	chr4:57036360-57196890	TTD7PVmother_nt	TTD7PV_nt	OK	0.16076	1.47837	3.20104	5.65975	5.00E-05	0.000948525	yes
KIF13B	chr8:28924794-29120610	TTD7PVmother_nt	TTD7PV_nt	OK	0.46941	0.191664	-1.29225	-2.2326	0.0006	0.00798882	yes
KIF17	chr1:20990506-21044317	TTD7PVmother_nt	TTD7PV_nt	OK	0.52718	0.209562	-1.33092	-1.873	0.0016	0.0176494	yes
KIF26B	chr1:245318286-245866428	TTD7PVmother_nt	TTD7PV_nt	OK	2.05803	0.91452	-1.17018	-2.8131	5.00E-05	0.000948525	yes
KIFC2	chr8:145691737-145701718	TTD7PVmother_nt	TTD7PV_nt	OK	6.69306	2.3462	-1.51234	-4.1211	5.00E-05	0.000948525	yes
KLHDC7B	chr22:50986461-50989452	TTD7PVmother_nt	TTD7PV_nt	OK	0.26168	1.58158	2.59551	4.01399	5.00E-05	0.000948525	yes
KLRAP1	chr12:10741076-10752434	TTD7PVmother_nt	TTD7PV_nt	OK	0.92502	0.367189	-1.33296	-2.2426	0.00305	0.0293851	yes
KRT14	chr17:39738530-39743147	TTD7PVmother_nt	TTD7PV_nt	OK	2.8847	0.453511	-2.66921	-4.2716	5.00E-05	0.000948525	yes
KRT18	chr12:53290970-53346685	TTD7PVmother_nt	TTD7PV_nt	OK	9.95766	2.058	-2.27457	-2.8754	5.00E-05	0.000948525	yes
KRTAP1-1	chr17:39196810-39197713	TTD7PVmother_nt	TTD7PV_nt	OK	5.38525	1.37657	-1.96794	-4.4204	5.00E-05	0.000948525	yes
KRTAP1-5	chr17:39182278-39183454	TTD7PVmother_nt	TTD7PV_nt	OK	40.8887	18.2927	-1.16044	-4.5067	5.00E-05	0.000948525	yes
KRTAP2-3	chr17:39215492-39216344	TTD7PVmother_nt	TTD7PV_nt	OK	1.65916	7.00439	2.07781	4.80001	5.00E-05	0.000948525	yes
LAMC2	chr1:183155173-183214262	TTD7PVmother_nt	TTD7PV_nt	OK	1.36402	0.531669	-1.35926	-2.5625	5.00E-05	0.000948525	yes
LAMP3	chr3:182840002-182880667	TTD7PVmother_nt	TTD7PV_nt	OK	0.14899	1.4507	3.28342	4.99451	5.00E-05	0.000948525	yes
LBH	chr2:30454396-30482899	TTD7PVmother_nt	TTD7PV_nt	OK	59.6405	21.6435	-1.46236	-4.8117	5.00E-05	0.000948525	yes

Gene	Location	Sample1	Sample2	Status	Value1	Value2	Value3	Value4	p-value	q-value	Sig
LDLRAD4	chr18:13218728-13652753	TTD7PVmother_nt	TTD7PV_nt	OK	0.60687	0.147922	-2.03656	-3.3617	5.00E-05	0.000948525	yes
LDOC1	chrX:140269930-140271310	TTD7PVmother_nt	TTD7PV_nt	OK	25.4025	3.95799	-2.68213	-8.059	5.00E-05	0.000948525	yes
LGALS3BP	chr17:76967334-76976061	TTD7PVmother_nt	TTD7PV_nt	OK	25.6728	4.92421	-2.38228	-6.9276	5.00E-05	0.000948525	yes
LGR5	chr12:71833812-71978621	TTD7PVmother_nt	TTD7PV_nt	OK	0.31384	15.4438	5.62086	10.8273	5.00E-05	0.000948525	yes
LIMCH1	chr4:41362803-41702061	TTD7PVmother_nt	TTD7PV_nt	OK	7.45567	1.90125	-1.97139	-4.8048	5.00E-05	0.000948525	yes
LINC00312	chr3:8613467-8616354	TTD7PVmother_nt	TTD7PV_nt	OK	1.52744	0.650137	-1.2323	-2.4277	0.00085	0.0105426	yes
LINC00346	chr13:111516333-111522655	TTD7PVmother_nt	TTD7PV_nt	OK	0.20191	0.552042	1.45107	2.37519	5.00E-05	0.000948525	yes
LINC00472	chr6:72124148-72130448	TTD7PVmother_nt	TTD7PV_nt	OK	1.22597	0.579016	-1.08225	-2.056	0.004	0.0366439	yes
LINC00478	chr21:17442841-17982094	TTD7PVmother_nt	TTD7PV_nt	OK	0.3837	0.958817	1.32126	2.21313	0.0007	0.00906687	yes
LINC00578	chr3:177159708-177470492	TTD7PVmother_nt	TTD7PV_nt	OK	0.71919	0.163282	-2.139	-2.4031	0.00315	0.0301678	yes
LINC00607	chr2:216476285-216708259	TTD7PVmother_nt	TTD7PV_nt	OK	1.01798	0.291548	-1.80391	-3.052	5.00E-05	0.000948525	yes
LINC00649	chr21:35303515-35343487	TTD7PVmother_nt	TTD7PV_nt	OK	0.0587	0.560402	3.25496	3.53108	0.00055	0.00745427	yes
LINC00842	chr10:47096453-47151400	TTD7PVmother_nt	TTD7PV_nt	OK	1.73917	0.65854	-1.40106	-2.4627	0.00025	0.00388815	yes
LMO7	chr13:76194569-76434006	TTD7PVmother_nt	TTD7PV_nt	OK	92.4079	43.4372	-1.08908	-2.8616	5.00E-05	0.000948525	yes
LMOD1	chr1:201865583-201915716	TTD7PVmother_nt	TTD7PV_nt	OK	6.14118	1.59682	-1.94332	-4.3258	5.00E-05	0.000948525	yes
LOC100130992	chr10:22541000-22547477	TTD7PVmother_nt	TTD7PV_nt	OK	0.34957	0.761436	1.12313	2.31152	0.0013	0.0149558	yes
LOC100505695	chr2:171627603-171634757	TTD7PVmother_nt	TTD7PV_nt	OK	0.63769	1.93389	1.60057	1.80536	0.0026	0.0259234	yes
LOC146880	chr17:62745779-62778117	TTD7PVmother_nt	TTD7PV_nt	OK	11.9585	5.16773	-1.21043	-3.4203	5.00E-05	0.000948525	yes
LOC284344	chr19:43715942-43752798	TTD7PVmother_nt	TTD7PV_nt	OK	0.67275	0.165767	-2.02091	-2.5654	0.0017	0.0184518	yes
LOC285084	chr2:175190754-175195370	TTD7PVmother_nt	TTD7PV_nt	OK	4.66398	0.162344	-4.84444	-7.9792	5.00E-05	0.000948525	yes
LOC339524	chr1:87595447-87634886	TTD7PVmother_nt	TTD7PV_nt	OK	0.91645	0.059642	-3.94167	-2.9226	5.00E-05	0.000948525	yes
LOC399753	chr10:49218158-49239658	TTD7PVmother_nt	TTD7PV_nt	OK	0.56938	0.092725	-2.61836	-2.9086	0.0006	0.00798882	yes
LOC619207	chr10:135267431-135281953	TTD7PVmother_nt	TTD7PV_nt	OK	0.75758	0.35043	-1.11227	-1.969	0.0021	0.0219061	yes
LOC646329	chr7:130565750-130598069	TTD7PVmother_nt	TTD7PV_nt	OK	2.96926	1.13048	-1.39317	-2.9628	0.0001	0.00172182	yes
LOC654342	chr2:91824708-91847975	TTD7PVmother_nt	TTD7PV_nt	OK	10.7781	24.5141	1.18551	4.35319	5.00E-05	0.000948525	yes
LOC654433	chr2:113973573-114036498	TTD7PVmother_nt	TTD7PV_nt	OK	9.12249	0.210792	-5.43554	-7.9661	5.00E-05	0.000948525	yes
LPPR3	chr19:812487-821952	TTD7PVmother_nt	TTD7PV_nt	OK	0.49223	0.159651	-1.62442	-1.956	0.00275	0.0271038	yes
LRIG1	chr3:66119284-66550845	TTD7PVmother_nt	TTD7PV_nt	OK	7.26248	3.2799	-1.14681	-2.2552	0.00015	0.00249264	yes
LRRC15	chr3:194075975-194090472	TTD7PVmother_nt	TTD7PV_nt	OK	101.867	32.8674	-1.63195	-4.513	5.00E-05	0.000948525	yes
LRRC17	chr7:102453307-102715288	TTD7PVmother_nt	TTD7PV_nt	OK	1.10886	2.47846	1.16037	2.01906	0.001	0.0119535	yes
LRRC2	chr3:46556877-46608040	TTD7PVmother_nt	TTD7PV_nt	OK	8.41973	3.33891	-1.33439	-3.8736	5.00E-05	0.000948525	yes
LRRC32	chr11:76368567-76381791	TTD7PVmother_nt	TTD7PV_nt	OK	105.59	27.0966	-1.96229	-4.9941	5.00E-05	0.000948525	yes
LRRC8E	chr19:7953389-7966908	TTD7PVmother_nt	TTD7PV_nt	OK	2.48601	0.64862	-1.93839	-3.6917	5.00E-05	0.000948525	yes

LSP1	chr11:1874199-1913493	TTD7PVmother_nt	TTD7PV_nt	OK	0.88011	0.256582	-1.77827	-1.8656	0.00025	0.00388815	yes
LY6K	chr8:143781528-143808391	TTD7PVmother_nt	TTD7PV_nt	OK	4.86536	11.944	1.29566	3.36342	5.00E-05	0.000948525	yes
LYN	chr8:56792385-56925006	TTD7PVmother_nt	TTD7PV_nt	OK	1.65383	0.468952	-1.81829	-3.3933	5.00E-05	0.000948525	yes
LYNX1	chr8:143845755-143859640	TTD7PVmother_nt	TTD7PV_nt	OK	16.7011	6.34907	-1.39532	-4.0324	5.00E-05	0.000948525	yes
LYPD3	chr19:43964945-43969831	TTD7PVmother_nt	TTD7PV_nt	OK	0.66062	0.120492	-2.45489	-3.068	0.0017	0.0184518	yes
LZTS1	chr8:20103675-20112803	TTD7PVmother_nt	TTD7PV_nt	OK	0.45194	0.112241	-2.00953	-2.6589	5.00E-05	0.000948525	yes
MAF	chr16:79627744-79634622	TTD7PVmother_nt	TTD7PV_nt	OK	1.17365	2.52887	1.10749	2.24197	0.00025	0.00388815	yes
MAFG-AS1	chr17:79885704-79888629	TTD7PVmother_nt	TTD7PV_nt	OK	2.30515	5.0555	1.133	2.74032	0.0001	0.00172182	yes
MAGI1	chr3:65339905-66024509	TTD7PVmother_nt	TTD7PV_nt	OK	8.206	4.00894	-1.03346	-3.1306	5.00E-05	0.000948525	yes
MALAT1	chr11:65265232-65273939	TTD7PVmother_nt	TTD7PV_nt	OK	51.5801	21.7392	-1.24652	-3.7996	5.00E-05	0.000948525	yes
MALL	chr2:110841446-110874143	TTD7PVmother_nt	TTD7PV_nt	OK	11.5538	32.1041	1.47439	4.78913	5.00E-05	0.000948525	yes
MAMDC2	chr9:72658496-72873790	TTD7PVmother_nt	TTD7PV_nt	OK	0.54485	0.116735	-2.22261	-2.6101	0.00145	0.0163452	yes
MAOA	chrX:43514154-43606071	TTD7PVmother_nt	TTD7PV_nt	OK	1.52564	0.092945	-4.03691	-5.5764	5.00E-05	0.000948525	yes
MAP6	chr11:75297962-75379479	TTD7PVmother_nt	TTD7PV_nt	OK	5.7419	1.22381	-2.23014	-4.627	5.00E-05	0.000948525	yes
MBOAT1	chr6:20099915-20212695	TTD7PVmother_nt	TTD7PV_nt	OK	1.07774	0.478691	-1.17084	-2.0907	0.00085	0.0105426	yes
MBP	chr18:74690788-74844774	TTD7PVmother_nt	TTD7PV_nt	OK	3.73168	0.665078	-2.48823	-5.0526	5.00E-05	0.000948525	yes
MC4R	chr18:58038563-58040001	TTD7PVmother_nt	TTD7PV_nt	OK	0.67685	1.72642	1.35088	2.32717	0.00335	0.0318932	yes
MCOLN3	chr1:85483764-85514223	TTD7PVmother_nt	TTD7PV_nt	OK	1.67342	0.39034	-2.1	-3.3483	5.00E-05	0.000948525	yes
MEIS3	chr19:47906374-47922785	TTD7PVmother_nt	TTD7PV_nt	OK	18.3911	6.17029	-1.5756	-4.1959	5.00E-05	0.000948525	yes
METTL7A	chr12:51318533-51326300	TTD7PVmother_nt	TTD7PV_nt	OK	4.98964	2.34035	-1.09221	-2.9494	5.00E-05	0.000948525	yes
MFAP5	chr12:8798539-8815433	TTD7PVmother_nt	TTD7PV_nt	OK	259.525	117.617	-1.14178	-3.1926	0.0001	0.00172182	yes
MFSD7	chr4:671710-682973	TTD7PVmother_nt	TTD7PV_nt	OK	4.96355	0.777569	-2.67433	-3.3962	5.00E-05	0.000948525	yes
MGARP	chr4:140187316-140201492	TTD7PVmother_nt	TTD7PV_nt	OK	12.1399	3.15544	-1.94384	-4.9913	5.00E-05	0.000948525	yes
MICA	chr6_ssto_hap7:2701358-2716888	TTD7PVmother_nt	TTD7PV_nt	OK	27.2523	8.937	-1.60852	-4.1918	5.00E-05	0.000948525	yes
MIR143HG	chr5:148786439-148812399	TTD7PVmother_nt	TTD7PV_nt	OK	3.65836	1.37019	-1.41682	-3.4312	5.00E-05	0.000948525	yes
MIR210HG	chr11:565656-568457	TTD7PVmother_nt	TTD7PV_nt	OK	2.07729	0.374195	-2.47284	-3.7063	5.00E-05	0.000948525	yes
MITF	chr3:69788585-70017488	TTD7PVmother_nt	TTD7PV_nt	OK	1.45831	0.677224	-1.10659	-2.1045	0.0004	0.00575481	yes
MKX	chr10:27961802-28034778	TTD7PVmother_nt	TTD7PV_nt	OK	13.3865	6.47298	-1.04827	-3.2707	5.00E-05	0.000948525	yes
MLPH	chr2:238395877-238463961	TTD7PVmother_nt	TTD7PV_nt	OK	1.61998	0.175563	-3.20591	-4.6089	5.00E-05	0.000948525	yes
MMD	chr17:53469973-53499341	TTD7PVmother_nt	TTD7PV_nt	OK	2.93292	1.29803	-1.17601	-2.847	0.00035	0.00513307	yes
MMP10	chr11:102641232-102651359	TTD7PVmother_nt	TTD7PV_nt	OK	2.51968	0.453495	-2.47408	-4.1464	5.00E-05	0.000948525	yes
MMP12	chr11:102733463-102745764	TTD7PVmother_nt	TTD7PV_nt	OK	2.95622	0.566382	-2.38391	-4.2214	5.00E-05	0.000948525	yes
MMP15	chr16:58059281-58080804	TTD7PVmother_nt	TTD7PV_nt	OK	4.13679	1.8068	-1.19507	-3.2377	5.00E-05	0.000948525	yes

Gene	Location	Sample1	Sample2	Status	Value1	Value2	log2FC	stat	p-value	q-value	sig
MMP3	chr11:102654406-102714342	TTD7PVmother_nt	TTD7PV_nt	OK	232.701	72.2742	-1.68693	-1.8159	0.0042	0.0380962	yes
MOXD1	chr6:132617193-132722664	TTD7PVmother_nt	TTD7PV_nt	OK	67.6325	26.2902	-1.36319	-4.7851	5.00E-05	0.000948525	yes
MPP3	chr17:41878166-41910547	TTD7PVmother_nt	TTD7PV_nt	OK	3.92129	1.93621	-1.01809	-2.1607	0.0002	0.00323166	yes
MRAP2	chr6:84743419-84800605	TTD7PVmother_nt	TTD7PV_nt	OK	2.28517	0.625714	-1.86872	-3.4646	5.00E-05	0.000948525	yes
MREG	chr2:216807313-216878346	TTD7PVmother_nt	TTD7PV_nt	OK	2.31064	1.01042	-1.19334	-2.5938	0.00025	0.00388815	yes
MRVI1	chr11:10562782-10715535	TTD7PVmother_nt	TTD7PV_nt	OK	4.19907	0.206401	-4.34655	-7.1611	5.00E-05	0.000948525	yes
MSR1	chr8:15965386-16050300	TTD7PVmother_nt	TTD7PV_nt	OK	0.16799	0.79473	2.24207	3.12069	5.00E-05	0.000948525	yes
MSTN	chr2:190920425-190927455	TTD7PVmother_nt	TTD7PV_nt	OK	0.53044	3.58365	2.75616	5.31856	5.00E-05	0.000948525	yes
MT1E	chr16:56659584-56661024	TTD7PVmother_nt	TTD7PV_nt	OK	32.0787	84.5707	1.39854	7.54698	5.00E-05	0.000948525	yes
MUC1	chr1:155158299-155162706	TTD7PVmother_nt	TTD7PV_nt	OK	10.9474	5.41418	-1.01577	-2.5345	5.00E-05	0.000948525	yes
MX1	chr21:42792519-42831141	TTD7PVmother_nt	TTD7PV_nt	OK	0.97411	2.03859	1.06542	1.95813	0.0006	0.00798882	yes
MYADM	chr19:54369610-54379689	TTD7PVmother_nt	TTD7PV_nt	OK	140.191	68.1888	-1.03979	-3.3345	5.00E-05	0.000948525	yes
MYH2	chr17:10424464-10453017	TTD7PVmother_nt	TTD7PV_nt	OK	0.69718	0.309382	-1.17214	-1.5764	0.00085	0.0105426	yes
MYL9	chr20:35169886-35178226	TTD7PVmother_nt	TTD7PV_nt	OK	547.293	249.389	-1.13392	-2.9319	5.00E-05	0.000948525	yes
MYLK	chr3:123304402-123603149	TTD7PVmother_nt	TTD7PV_nt	OK	29.3599	7.79073	-1.91401	-4.8294	5.00E-05	0.000948525	yes
N4BP2L1	chr13:32974859-33002315	TTD7PVmother_nt	TTD7PV_nt	OK	0.88404	0.366453	-1.27048	-1.9534	0.00125	0.0144842	yes
NBL1	chr1:19923470-19984949	TTD7PVmother_nt	TTD7PV_nt	OK	140.908	59.1362	-1.25264	-3.1145	5.00E-05	0.000948525	yes
NDRG2	chr14:21484921-21493935	TTD7PVmother_nt	TTD7PV_nt	OK	1.01482	0.200797	-2.33741	-2.5767	5.00E-05	0.000948525	yes
NDRG4	chr16:58497548-58547523	TTD7PVmother_nt	TTD7PV_nt	OK	1.58411	0.574918	-1.46225	-2.5022	5.00E-05	0.000948525	yes
NEGR1	chr1:71868624-72748277	TTD7PVmother_nt	TTD7PV_nt	OK	6.18971	2.43004	-1.34889	-4.1156	5.00E-05	0.000948525	yes
NEIL1	chr15:75639330-75647592	TTD7PVmother_nt	TTD7PV_nt	OK	1.31327	0.525986	-1.32007	-1.9127	0.0013	0.0149558	yes
NETO2	chr16:47115430-47177936	TTD7PVmother_nt	TTD7PV_nt	OK	0.67251	1.55432	1.20866	2.32434	0.00025	0.00388815	yes
NFASC	chr1:204797781-204991950	TTD7PVmother_nt	TTD7PV_nt	OK	19.5739	9.56841	-1.03258	-2.3957	5.00E-05	0.000948525	yes
NKX3-1	chr8:23536205-23540450	TTD7PVmother_nt	TTD7PV_nt	OK	3.33831	1.54491	-1.11159	-2.4643	0.0001	0.00172182	yes
NMNAT2	chr1:183217371-183387634	TTD7PVmother_nt	TTD7PV_nt	OK	0.54932	0.222483	-1.30394	-2.0383	0.00035	0.00513307	yes
NOTCH3	chr19:15270443-15311792	TTD7PVmother_nt	TTD7PV_nt	OK	6.78522	1.48315	-2.19373	-6.4036	5.00E-05	0.000948525	yes
NPR1	chr1:153651163-153666468	TTD7PVmother_nt	TTD7PV_nt	OK	3.23605	0.231978	-3.80217	-6.72	5.00E-05	0.000948525	yes
NPTX2	chr7:98246596-98259181	TTD7PVmother_nt	TTD7PV_nt	OK	0.29794	0.944007	1.66379	2.53504	0.00035	0.00513307	yes
NPTXR	chr22:39214455-39240017	TTD7PVmother_nt	TTD7PV_nt	OK	4.78774	1.65669	-1.53104	-4.2487	5.00E-05	0.000948525	yes
NQO1	chr16:69743303-69760533	TTD7PVmother_nt	TTD7PV_nt	OK	64.0712	134.379	1.06856	3.24345	5.00E-05	0.000948525	yes
NR0B1	chrX:30322538-30327495	TTD7PVmother_nt	TTD7PV_nt	OK	0.84263	0.294398	-1.51713	-2.1783	0.0042	0.0380962	yes
NRG1	chr8:31497267-32622558	TTD7PVmother_nt	TTD7PV_nt	OK	9.34313	24.8358	1.41044	3.89989	5.00E-05	0.000948525	yes
NRP2	chr2:206547223-206662857	TTD7PVmother_nt	TTD7PV_nt	OK	10.3616	4.24072	-1.28887	-3.5038	5.00E-05	0.000948525	yes

NTNG1	chr1:107682628-108024475	TTD7PVmother_nt	TTD7PV_nt	OK	3.82327	7.92767	1.05209	2.72328	5.00E-05	0.000948525	yes
NTRK2	chr9:87283465-87638505	TTD7PVmother_nt	TTD7PV_nt	OK	0.18794	0.742992	1.98311	3.18766	5.00E-05	0.000948525	yes
NXPH3	chr17:47653297-47661171	TTD7PVmother_nt	TTD7PV_nt	OK	0.86259	0.094238	-3.19431	-4.3618	5.00E-05	0.000948525	yes
OSBP2	chr22:31090792-31303811	TTD7PVmother_nt	TTD7PV_nt	OK	1.21791	0.465605	-1.38723	-2.4207	0.0001	0.00172182	yes
OSCAR	chr19:54597932-54604148	TTD7PVmother_nt	TTD7PV_nt	OK	1.60336	0.387131	-2.0502	-2.6922	5.00E-05	0.000948525	yes
OSR2	chr8:99956630-99964326	TTD7PVmother_nt	TTD7PV_nt	OK	35.7043	16.1915	-1.14086	-3.4337	5.00E-05	0.000948525	yes
PAG1	chr8:81880045-82024303	TTD7PVmother_nt	TTD7PV_nt	OK	0.71648	0.252593	-1.50411	-3.0469	5.00E-05	0.000948525	yes
PALLD	chr4:169418216-169849608	TTD7PVmother_nt	TTD7PV_nt	OK	27.0568	12.1255	-1.15794	-3.7286	5.00E-05	0.000948525	yes
PAM	chr5:102201526-102366808	TTD7PVmother_nt	TTD7PV_nt	OK	152.82	75.5463	-1.0164	-2.659	5.00E-05	0.000948525	yes
PAOX	chr10:135192740-135205198	TTD7PVmother_nt	TTD7PV_nt	OK	2.7146	1.32831	-1.03115	-1.7836	0.00265	0.0262793	yes
PAPPA2	chr1:176432306-176811970	TTD7PVmother_nt	TTD7PV_nt	OK	1.96494	11.3057	2.52449	6.82392	5.00E-05	0.000948525	yes
PARD6G	chr18:77905806-78005397	TTD7PVmother_nt	TTD7PV_nt	OK	2.32868	0.844232	-1.4638	-2.9683	5.00E-05	0.000948525	yes
PARK2	chr6:161768589-163745505	TTD7PVmother_nt	TTD7PV_nt	OK	0.72427	0.316578	-1.19398	-1.9125	0.0031	0.0297999	yes
PARP8	chr5:49961732-50142356	TTD7PVmother_nt	TTD7PV_nt	OK	0.55195	0.149901	-1.88054	-3.1317	5.00E-05	0.000948525	yes
PAX8	chr2:113973573-114036498	TTD7PVmother_nt	TTD7PV_nt	OK	0.58943	0.037813	-3.96234	-2.5787	0.00065	0.00852222	yes
PBX4	chr19:19672515-19729725	TTD7PVmother_nt	TTD7PV_nt	OK	0.67694	0.222274	-1.60669	-1.818	0.00385	0.035625	yes
PCDH10	chr4:134070469-134112732	TTD7PVmother_nt	TTD7PV_nt	OK	2.22867	13.0853	2.55369	7.18681	5.00E-05	0.000948525	yes
PCDH7	chr4:30722029-31148423	TTD7PVmother_nt	TTD7PV_nt	OK	3.66205	0.940284	-1.96148	-4.4017	5.00E-05	0.000948525	yes
PCDHB10	chr5:140571951-140575213	TTD7PVmother_nt	TTD7PV_nt	OK	0.59083	0.233594	-1.33875	-2.1174	0.0015	0.0167911	yes
PCDHB14	chr5:140603077-140605860	TTD7PVmother_nt	TTD7PV_nt	OK	1.15029	0.56388	-1.02853	-1.8515	0.00455	0.0404717	yes
PCDHB16	chr5:140560979-140565796	TTD7PVmother_nt	TTD7PV_nt	OK	1.08834	0.441251	-1.30245	-2.5947	5.00E-05	0.000948525	yes
PCDHB5	chr5:140514799-140517704	TTD7PVmother_nt	TTD7PV_nt	OK	0.53629	1.37127	1.35444	2.47708	0.00035	0.00513307	yes
PCSK1	chr5:95726039-95768985	TTD7PVmother_nt	TTD7PV_nt	OK	0.81238	2.63596	1.6981	3.73675	5.00E-05	0.000948525	yes
PCSK1N	chrX:48689503-48694036	TTD7PVmother_nt	TTD7PV_nt	OK	2.13317	9.68917	2.18337	5.46776	5.00E-05	0.000948525	yes
PCSK5	chr9:78505559-78977255	TTD7PVmother_nt	TTD7PV_nt	OK	4.20147	1.93354	-1.11965	-2.4423	5.00E-05	0.000948525	yes
PDE1A	chr2:183004761-183387572	TTD7PVmother_nt	TTD7PV_nt	OK	4.80476	2.0733	-1.21253	-2.5721	5.00E-05	0.000948525	yes
PDE1C	chr7:31792631-32338383	TTD7PVmother_nt	TTD7PV_nt	OK	3.56753	7.56733	1.08486	2.40147	0.0001	0.00172182	yes
PDGFRL	chr8:17433941-17500642	TTD7PVmother_nt	TTD7PV_nt	OK	6.83719	3.07925	-1.15083	-2.9352	5.00E-05	0.000948525	yes
PDLIM5	chr4:95373007-95589378	TTD7PVmother_nt	TTD7PV_nt	OK	25.4877	12.2531	-1.05665	-2.793	5.00E-05	0.000948525	yes
PDPN	chr1:13910251-13944452	TTD7PVmother_nt	TTD7PV_nt	OK	2.26949	0.966713	-1.23121	-2.3248	0.00035	0.00513307	yes
PEX6	chr6:42928499-42946981	TTD7PVmother_nt	TTD7PV_nt	OK	3.6384	8.10154	1.15489	3.1464	5.00E-05	0.000948525	yes
PGM2L1	chr11:74041360-74109502	TTD7PVmother_nt	TTD7PV_nt	OK	2.19418	0.87704	-1.32297	-3.5725	5.00E-05	0.000948525	yes
PHGDH	chr1:120254418-120286849	TTD7PVmother_nt	TTD7PV_nt	OK	84.7345	182.416	1.10621	3.63881	5.00E-05	0.000948525	yes

PIANP	chr12:6802956-6810009	TTD7PVmother_nt	TTD7PV_nt	OK	1.83878	0.718796	-1.35509	-2.3012	0.00045	0.0062912	yes
PIFO	chr1:111889194-111895639	TTD7PVmother_nt	TTD7PV_nt	OK	0.7034	0.267087	-1.39702	-2.0311	0.00345	0.0326039	yes
PIK3IP1	chr22:31677578-31688520	TTD7PVmother_nt	TTD7PV_nt	OK	24.496	7.20543	-1.76539	-5.0072	5.00E-05	0.000948525	yes
PIK3R3	chr1:46505811-46598708	TTD7PVmother_nt	TTD7PV_nt	OK	1.40105	0.65776	-1.09088	-2.2427	0.00035	0.00513307	yes
PINLYP	chr19:44080951-44086256	TTD7PVmother_nt	TTD7PV_nt	OK	2.05578	5.0346	1.29219	1.78061	0.0037	0.0344352	yes
PION	chr7:76940067-77045717	TTD7PVmother_nt	TTD7PV_nt	OK	0.74835	0.25759	-1.53864	-2.413	0.0009	0.0110351	yes
PIR	chrX:15363712-15511711	TTD7PVmother_nt	TTD7PV_nt	OK	2.84586	6.34762	1.15735	2.34912	0.0001	0.00172182	yes
PITPNM3	chr17:6354582-6459877	TTD7PVmother_nt	TTD7PV_nt	OK	1.33917	0.329974	-2.02092	-3.9431	5.00E-05	0.000948525	yes
PLA2G4C	chr19:48551099-48614109	TTD7PVmother_nt	TTD7PV_nt	OK	1.31747	0.45477	-1.53456	-2.278	0.00035	0.00513307	yes
PLCB4	chr20:9049700-9461462	TTD7PVmother_nt	TTD7PV_nt	OK	3.40637	0.856514	-1.99169	-4.3065	5.00E-05	0.000948525	yes
PLCL1	chr2:198669425-199014608	TTD7PVmother_nt	TTD7PV_nt	OK	0.91047	0.398324	-1.19268	-2.3991	0.00035	0.00513307	yes
PLEKHA6	chr1:204187978-204329057	TTD7PVmother_nt	TTD7PV_nt	OK	0.99812	0.231583	-2.10769	-3.918	5.00E-05	0.000948525	yes
PLEKHG5	chr1:6521213-6580121	TTD7PVmother_nt	TTD7PV_nt	OK	3.33197	1.50081	-1.15063	-2.5261	5.00E-05	0.000948525	yes
PLEKHM1P	chr17:62780958-62833302	TTD7PVmother_nt	TTD7PV_nt	OK	6.82081	3.06578	-1.15369	-2.8749	5.00E-05	0.000948525	yes
PLXNB1	chr3:48445260-48471460	TTD7PVmother_nt	TTD7PV_nt	OK	10.9353	3.8091	-1.52147	-4.6086	5.00E-05	0.000948525	yes
PLXNB3	chrX:153029650-153044801	TTD7PVmother_nt	TTD7PV_nt	OK	3.67503	0.7448	-2.30283	-5.3256	5.00E-05	0.000948525	yes
PLXNC1	chr12:94542498-94701451	TTD7PVmother_nt	TTD7PV_nt	OK	2.9904	0.659025	-2.18193	-4.3999	5.00E-05	0.000948525	yes
PMP22	chr17:15133095-15168644	TTD7PVmother_nt	TTD7PV_nt	OK	257.528	113.575	-1.18108	-3.4143	5.00E-05	0.000948525	yes
PNMAL1	chr19:46969747-46974820	TTD7PVmother_nt	TTD7PV_nt	OK	3.75547	0.802162	-2.22703	-4.4551	5.00E-05	0.000948525	yes
PNPLA7	chr9:140354404-140444986	TTD7PVmother_nt	TTD7PV_nt	OK	1.09327	0.237448	-2.20296	-3.5853	5.00E-05	0.000948525	yes
POSTN	chr13:38136718-38172981	TTD7PVmother_nt	TTD7PV_nt	OK	228.618	918.639	2.00656	2.73015	5.00E-05	0.000948525	yes
PPAP2C	chr19:281043-291435	TTD7PVmother_nt	TTD7PV_nt	OK	7.29138	2.62403	-1.47441	-2.876	5.00E-05	0.000948525	yes
PPAPDC3	chr9:134165080-134184649	TTD7PVmother_nt	TTD7PV_nt	OK	2.23914	0.542296	-2.04579	-3.8916	5.00E-05	0.000948525	yes
PPFIA4	chr1:203020310-203047864	TTD7PVmother_nt	TTD7PV_nt	OK	0.92531	0.170934	-2.43649	-3.8592	5.00E-05	0.000948525	yes
PPFIBP2	chr11:7534995-7674996	TTD7PVmother_nt	TTD7PV_nt	OK	7.62719	3.34935	-1.18727	-3.0387	5.00E-05	0.000948525	yes
PPP1R14A	chr19:38741876-38747231	TTD7PVmother_nt	TTD7PV_nt	OK	5.89419	0.507554	-3.53766	-3.5026	5.00E-05	0.000948525	yes
PPP4R4	chr14:94640648-94746072	TTD7PVmother_nt	TTD7PV_nt	OK	0.46501	0.0723	-2.68519	-2.0469	0.00055	0.00745427	yes
PRDM16	chr1:2985741-3355185	TTD7PVmother_nt	TTD7PV_nt	OK	0.18272	1.20477	2.72103	4.8326	5.00E-05	0.000948525	yes
PRELP	chr1:203444882-203460479	TTD7PVmother_nt	TTD7PV_nt	OK	4.34769	0.690122	-2.65533	-5.9242	5.00E-05	0.000948525	yes
PRICKLE4	chr6:41748499-41755110	TTD7PVmother_nt	TTD7PV_nt	OK	2.30439	1.12633	-1.03276	-1.9976	0.0039	0.0360099	yes
PRIMA1	chr14:94184643-94254766	TTD7PVmother_nt	TTD7PV_nt	OK	1.00133	0.290308	-1.78626	-2.8923	5.00E-05	0.000948525	yes
PRKCD	chr3:53195222-53226733	TTD7PVmother_nt	TTD7PV_nt	OK	5.96674	2.6549	-1.16829	-2.7114	5.00E-05	0.000948525	yes
PROSAPIP1	chr20:3143272-3149207	TTD7PVmother_nt	TTD7PV_nt	OK	3.62697	1.73623	-1.06281	-2.8978	5.00E-05	0.000948525	yes

Gene	Location	Sample1	Sample2	Status	Val1	Val2	Val3	Val4	p-value	q-value	Sig
PRSS23	chr11:86511490-86522273	TTD7PVmother_nt	TTD7PV_nt	OK	157.717	74.4203	-1.08357	-3.3342	5.00E-05	0.000948525	yes
PRUNE2	chr9:79226291-79521003	TTD7PVmother_nt	TTD7PV_nt	OK	7.47353	1.07876	-2.79241	-7.6713	5.00E-05	0.000948525	yes
PSEN2	chr1:227058272-227083804	TTD7PVmother_nt	TTD7PV_nt	OK	8.07625	2.76692	-1.54541	-3.6474	5.00E-05	0.000948525	yes
PSG1	chr19:43370612-43383871	TTD7PVmother_nt	TTD7PV_nt	OK	31.9413	1.90932	-4.06429	-8.7634	5.00E-05	0.000948525	yes
PSG10P	chr19:43341148-43359870	TTD7PVmother_nt	TTD7PV_nt	OK	0.92428	0.293208	-1.6564	-2.3513	0.00095	0.0115056	yes
PSG2	chr19:43568361-43586893	TTD7PVmother_nt	TTD7PV_nt	OK	5.75497	1.78024	-1.69274	-3.8439	5.00E-05	0.000948525	yes
PSG4	chr19:43696853-43709926	TTD7PVmother_nt	TTD7PV_nt	OK	0.86325	35.493	5.36161	10.3307	5.00E-05	0.000948525	yes
PSG9	chr19:43757434-43773682	TTD7PVmother_nt	TTD7PV_nt	OK	1.449	0.588698	-1.29946	-2.2163	0.00185	0.0197466	yes
PSPH	chr7:56078743-56119268	TTD7PVmother_nt	TTD7PV_nt	OK	6.26408	12.9808	1.0512	3.36383	5.00E-05	0.000948525	yes
PTGES	chr9:132500614-132515344	TTD7PVmother_nt	TTD7PV_nt	OK	55.9226	25.4288	-1.13697	-4.3268	5.00E-05	0.000948525	yes
PTGIS	chr20:48120410-48184707	TTD7PVmother_nt	TTD7PV_nt	OK	93.671	11.7723	-2.99221	-8.4748	5.00E-05	0.000948525	yes
PTGS1	chr9:125132808-125157982	TTD7PVmother_nt	TTD7PV_nt	OK	16.5142	4.22483	-1.96674	-5.8941	5.00E-05	0.000948525	yes
PTH1R	chr3:46919235-46945289	TTD7PVmother_nt	TTD7PV_nt	OK	1.07982	2.1968	1.02461	1.76092	0.0025	0.0251801	yes
PTHLH	chr12:28111016-28124916	TTD7PVmother_nt	TTD7PV_nt	OK	1.48634	0.454043	-1.71086	-2.2003	0.00055	0.00745427	yes
PTN	chr7:136912091-137028546	TTD7PVmother_nt	TTD7PV_nt	OK	7.30938	3.4906	-1.06627	-2.676	0.0001	0.00172182	yes
PTPRN	chr2:220154344-220174295	TTD7PVmother_nt	TTD7PV_nt	OK	6.46631	2.77698	-1.21943	-2.8592	5.00E-05	0.000948525	yes
PTPRU	chr1:29563027-29653325	TTD7PVmother_nt	TTD7PV_nt	OK	5.76448	2.50215	-1.20402	-3.39	5.00E-05	0.000948525	yes
PYCR1	chr17:79890266-79894968	TTD7PVmother_nt	TTD7PV_nt	OK	39.4192	82.5911	1.06709	3.09799	5.00E-05	0.000948525	yes
QPCT	chr2:37571752-37600465	TTD7PVmother_nt	TTD7PV_nt	OK	18.8415	8.63993	-1.12482	-3.8008	5.00E-05	0.000948525	yes
QPRT	chr16:29690440-29709314	TTD7PVmother_nt	TTD7PV_nt	OK	22.741	6.25287	-1.86271	-5.4077	5.00E-05	0.000948525	yes
RAB20	chr13:111175412-111214071	TTD7PVmother_nt	TTD7PV_nt	OK	1.08028	0.240185	-2.16919	-2.9172	0.00035	0.00513307	yes
RAB39B	chrX:154487525-154493852	TTD7PVmother_nt	TTD7PV_nt	OK	0.42222	1.31332	1.63715	3.00651	5.00E-05	0.000948525	yes
RAB3B	chr1:52373627-52456436	TTD7PVmother_nt	TTD7PV_nt	OK	9.14851	4.09043	-1.16128	-3.8002	5.00E-05	0.000948525	yes
RAP1GAP2	chr17:2699731-2941035	TTD7PVmother_nt	TTD7PV_nt	OK	0.47725	0.021083	-4.50061	-3.8924	0.00015	0.00249264	yes
RARRES1	chr3:158414896-158450275	TTD7PVmother_nt	TTD7PV_nt	OK	0.7164	2.28549	1.67366	2.27758	0.0002	0.00323166	yes
RARRES2	chr7:150035406-150038763	TTD7PVmother_nt	TTD7PV_nt	OK	9.50367	25.591	1.42908	4.59902	5.00E-05	0.000948525	yes
RASD1	chr17:17397752-17399709	TTD7PVmother_nt	TTD7PV_nt	OK	3.08015	0.660106	-2.22223	-3.5671	5.00E-05	0.000948525	yes
RASD2	chr22:35937351-35950045	TTD7PVmother_nt	TTD7PV_nt	OK	1.53558	0.078315	-4.29336	-5.2585	5.00E-05	0.000948525	yes
RASSF3	chr12:65004292-65091347	TTD7PVmother_nt	TTD7PV_nt	OK	6.796	2.4858	-1.45097	-3.9241	5.00E-05	0.000948525	yes
RASSF5	chr1:206680878-206762616	TTD7PVmother_nt	TTD7PV_nt	OK	1.42928	0.674556	-1.08328	-1.9702	0.00075	0.0095227	yes
RASSF7	chr11:560970-564025	TTD7PVmother_nt	TTD7PV_nt	OK	2.21047	0.83479	-1.40487	-2.1708	0.0003	0.00450245	yes
RBM24	chr6:17281808-17294099	TTD7PVmother_nt	TTD7PV_nt	OK	2.74541	0.830439	-1.72508	-3.2168	5.00E-05	0.000948525	yes
RBP1	chr3:139236275-139258671	TTD7PVmother_nt	TTD7PV_nt	OK	0.523	1.9027	1.86317	1.94701	0.0006	0.00798882	yes

RENBP	chrX:153200721-153210232	TTD7PVmother_nt	TTD7PV_nt	OK	11.7764	2.84158	-2.05113	-5.1531	5.00E-05	0.000948525	yes
RGN	chrX:46937774-46952712	TTD7PVmother_nt	TTD7PV_nt	OK	1.25904	0.516358	-1.28588	-1.7937	0.00315	0.0301678	yes
RIMS1	chr6:72596405-73112845	TTD7PVmother_nt	TTD7PV_nt	OK	1.3277	0.152999	-3.11734	-3.5755	5.00E-05	0.000948525	yes
RIPK3	chr14:24805226-24809242	TTD7PVmother_nt	TTD7PV_nt	OK	9.62711	2.52649	-1.92997	-4.8783	5.00E-05	0.000948525	yes
RIPK4	chr21:43159528-43187249	TTD7PVmother_nt	TTD7PV_nt	OK	0.30058	1.15518	1.94227	2.98673	5.00E-05	0.000948525	yes
RNF144A	chr2:7052406-7184309	TTD7PVmother_nt	TTD7PV_nt	OK	1.8521	0.457255	-2.01809	-3.9792	5.00E-05	0.000948525	yes
RNF157	chr17:74132414-74236390	TTD7PVmother_nt	TTD7PV_nt	OK	0.88417	0.255801	-1.7893	-2.8869	5.00E-05	0.000948525	yes
RNF180	chr5:63461670-63668696	TTD7PVmother_nt	TTD7PV_nt	OK	1.13825	0.098105	-3.53635	-2.7034	0.00025	0.00388815	yes
RNF182	chr6:13924676-13980240	TTD7PVmother_nt	TTD7PV_nt	OK	2.54465	1.22935	-1.04957	-2.2478	0.00025	0.00388815	yes
RPL22L1	chr3:170582664-170588045	TTD7PVmother_nt	TTD7PV_nt	OK	15.1325	31.6191	1.06314	4.13249	5.00E-05	0.000948525	yes
RPP25	chr15:75247442-75249775	TTD7PVmother_nt	TTD7PV_nt	OK	4.65055	1.62919	-1.51324	-3.6109	5.00E-05	0.000948525	yes
RPSAP58	chr19:23945815-24010919	TTD7PVmother_nt	TTD7PV_nt	OK	4.4118	17.0266	1.94835	5.61598	5.00E-05	0.000948525	yes
RRAD	chr16:66955581-66959439	TTD7PVmother_nt	TTD7PV_nt	OK	6.09233	1.34847	-2.17567	-3.8689	5.00E-05	0.000948525	yes
RSPO3	chr6:127440047-127518184	TTD7PVmother_nt	TTD7PV_nt	OK	47.0823	8.94438	-2.39613	-7.2524	5.00E-05	0.000948525	yes
RTN4RL1	chr17:1837970-1928178	TTD7PVmother_nt	TTD7PV_nt	OK	1.2175	0.494287	-1.30051	-2.2753	0.00065	0.00852222	yes
S100P	chr4:6695565-6698897	TTD7PVmother_nt	TTD7PV_nt	OK	0.56807	3.35041	2.56018	5.13507	0.00215	0.022301	yes
S1PR1	chr1:101702304-101707076	TTD7PVmother_nt	TTD7PV_nt	OK	8.38817	17.1787	1.0342	3.48085	5.00E-05	0.000948525	yes
SALL1	chr16:51169885-51185183	TTD7PVmother_nt	TTD7PV_nt	OK	2.31222	0.283151	-3.02964	-5.5413	5.00E-05	0.000948525	yes
SBSPON	chr8:73976777-74005507	TTD7PVmother_nt	TTD7PV_nt	OK	1.06918	0.04848	-4.46297	-5.3704	5.00E-05	0.000948525	yes
SCG2	chr2:224461657-224467217	TTD7PVmother_nt	TTD7PV_nt	OK	4.06392	0.675764	-2.58828	-5.1297	5.00E-05	0.000948525	yes
SCG5	chr15:32933869-32989298	TTD7PVmother_nt	TTD7PV_nt	OK	5.1821	1.77911	-1.54238	-2.6719	5.00E-05	0.000948525	yes
SCIN	chr7:12610202-12693228	TTD7PVmother_nt	TTD7PV_nt	OK	6.04399	0.593113	-3.34912	-6.0018	5.00E-05	0.000948525	yes
SCN9A	chr2:167051696-167232497	TTD7PVmother_nt	TTD7PV_nt	OK	1.16477	0.078688	-3.88777	-6.3915	5.00E-05	0.000948525	yes
SCRG1	chr4:174309298-174320617	TTD7PVmother_nt	TTD7PV_nt	OK	9.19207	22.0261	1.26076	3.89544	5.00E-05	0.000948525	yes
SCUBE3	chr6:35182189-35218609	TTD7PVmother_nt	TTD7PV_nt	OK	4.15408	0.161693	-4.6832	-7.5031	5.00E-05	0.000948525	yes
SDPR	chr2:192699031-192712006	TTD7PVmother_nt	TTD7PV_nt	OK	5.5748	2.51368	-1.14912	-3.0026	5.00E-05	0.000948525	yes
SEC16B	chr1:177898241-177939050	TTD7PVmother_nt	TTD7PV_nt	OK	0.94292	1.89944	1.01036	2.10464	0.0004	0.00575481	yes
SEL1L3	chr4:25749048-25864610	TTD7PVmother_nt	TTD7PV_nt	OK	6.76311	14.0372	1.0535	2.93495	5.00E-05	0.000948525	yes
SEMA3E	chr7:82993221-83278479	TTD7PVmother_nt	TTD7PV_nt	OK	1.35578	0.668721	-1.01965	-2.2323	0.00035	0.00513307	yes
SEMA7A	chr15:74701629-74726299	TTD7PVmother_nt	TTD7PV_nt	OK	24.0053	11.8308	-1.02081	-3.0758	5.00E-05	0.000948525	yes
SERINC2	chr1:31882411-31907527	TTD7PVmother_nt	TTD7PV_nt	OK	26.3668	10.3525	-1.34874	-4.1646	5.00E-05	0.000948525	yes
SERPINB2	chr18:61554938-61571124	TTD7PVmother_nt	TTD7PV_nt	OK	20.3978	8.81647	-1.21014	-3.2517	5.00E-05	0.000948525	yes
SERPINB7	chr18:61420280-61472610	TTD7PVmother_nt	TTD7PV_nt	OK	6.31053	0.872202	-2.85503	-5.2538	5.00E-05	0.000948525	yes

SERPINH1	chr11:75273100-75283849	TTD7PVmother_nt	TTD7PV_nt	OK	363.848	795.726	1.12893	2.19163	5.00E-05	0.000948525	yes
SERPINI1	chr3:167453431-167543357	TTD7PVmother_nt	TTD7PV_nt	OK	1.75808	0.712647	-1.30274	-2.0032	0.0014	0.015879	yes
SEZ6L2	chr16:29882479-29910585	TTD7PVmother_nt	TTD7PV_nt	OK	8.01374	1.58494	-2.33805	-5.135	5.00E-05	0.000948525	yes
SFRP1	chr8:41119475-41166990	TTD7PVmother_nt	TTD7PV_nt	OK	59.8292	27.467	-1.12315	-3.6468	5.00E-05	0.000948525	yes
SFRP4	chr7:37945534-37956525	TTD7PVmother_nt	TTD7PV_nt	OK	18.548	0.267368	-6.11629	-9.9771	5.00E-05	0.000948525	yes
SGIP1	chr1:66999824-67210768	TTD7PVmother_nt	TTD7PV_nt	OK	2.6002	0.44234	-2.55539	-5.0421	5.00E-05	0.000948525	yes
SGK1	chr6:134490383-134639196	TTD7PVmother_nt	TTD7PV_nt	OK	118.61	47.0243	-1.33475	-4.0088	5.00E-05	0.000948525	yes
SGK223	chr8:8175257-8239257	TTD7PVmother_nt	TTD7PV_nt	OK	2.22559	0.745501	-1.57791	-3.2427	5.00E-05	0.000948525	yes
SH2D5	chr1:21046224-21059133	TTD7PVmother_nt	TTD7PV_nt	OK	5.13041	2.26241	-1.18122	-2.9304	5.00E-05	0.000948525	yes
SH3BGR	chr21:40817796-40887433	TTD7PVmother_nt	TTD7PV_nt	OK	3.22234	19.104	2.56769	5.1268	5.00E-05	0.000948525	yes
SH3GL3	chr15:84116090-84287493	TTD7PVmother_nt	TTD7PV_nt	OK	0.1721	0.621571	1.85271	1.95303	0.00205	0.0214716	yes
SHANK2	chr11:70313960-70935808	TTD7PVmother_nt	TTD7PV_nt	OK	0.45472	0.110188	-2.04499	-3.3743	5.00E-05	0.000948525	yes
SHC2	chr19:416582-460996	TTD7PVmother_nt	TTD7PV_nt	OK	2.46494	1.0706	-1.20314	-2.4385	0.0006	0.00798882	yes
SHC3	chr9:91620685-91793682	TTD7PVmother_nt	TTD7PV_nt	OK	1.20606	0.087781	-3.78026	-6.4636	5.00E-05	0.000948525	yes
SIM1	chr6:100836749-100911551	TTD7PVmother_nt	TTD7PV_nt	OK	0.03774	0.634678	4.0717	4.08404	0.00045	0.0062912	yes
SLC16A2	chrX:73641327-73753764	TTD7PVmother_nt	TTD7PV_nt	OK	26.8128	12.5088	-1.09998	-3.8238	5.00E-05	0.000948525	yes
SLC16A3	chr17:80186281-80197375	TTD7PVmother_nt	TTD7PV_nt	OK	72.4171	20.5634	-1.81625	-5.6818	5.00E-05	0.000948525	yes
SLC16A9	chr10:61410521-61469649	TTD7PVmother_nt	TTD7PV_nt	OK	0.07642	0.5025	2.71712	3.61184	0.0001	0.00172182	yes
SLC25A30	chr13:45967453-45992516	TTD7PVmother_nt	TTD7PV_nt	OK	7.92091	3.7706	-1.07087	-3.3174	5.00E-05	0.000948525	yes
SLC2A8	chr9:130159416-130170170	TTD7PVmother_nt	TTD7PV_nt	OK	4.63693	1.70063	-1.4471	-2.9272	5.00E-05	0.000948525	yes
SLC30A4	chr15:45774679-45848928	TTD7PVmother_nt	TTD7PV_nt	OK	1.0927	0.344463	-1.66548	-2.8524	5.00E-05	0.000948525	yes
SLC31A2	chr9:115913237-115926422	TTD7PVmother_nt	TTD7PV_nt	OK	25.8717	6.64202	-1.96168	-6.3186	5.00E-05	0.000948525	yes
SLC40A1	chr2:190425315-190445537	TTD7PVmother_nt	TTD7PV_nt	OK	5.11062	1.35163	-1.9188	-4.6542	5.00E-05	0.000948525	yes
SLC44A3	chr1:95285897-95360803	TTD7PVmother_nt	TTD7PV_nt	OK	0.90371	0.371103	-1.28403	-1.8516	0.00225	0.0230778	yes
SLC4A3	chr2:220492291-220506702	TTD7PVmother_nt	TTD7PV_nt	OK	2.16501	0.710137	-1.6082	-3.1471	5.00E-05	0.000948525	yes
SLC4A4	chr4:72053002-72437804	TTD7PVmother_nt	TTD7PV_nt	OK	2.37214	0.926574	-1.35621	-3.385	5.00E-05	0.000948525	yes
SLC6A17	chr1:110693131-110744823	TTD7PVmother_nt	TTD7PV_nt	OK	1.27242	0.460537	-1.46618	-3.0162	5.00E-05	0.000948525	yes
SLC6A6	chr3:14444105-14583588	TTD7PVmother_nt	TTD7PV_nt	OK	8.34442	3.53958	-1.23723	-3.3917	5.00E-05	0.000948525	yes
SLC7A14	chr3:170177341-170303863	TTD7PVmother_nt	TTD7PV_nt	OK	1.56095	0.523736	-1.57551	-3.767	5.00E-05	0.000948525	yes
SLC7A5	chr16:87863628-87903100	TTD7PVmother_nt	TTD7PV_nt	OK	28.9965	59.5616	1.0385	3.20309	5.00E-05	0.000948525	yes
SLCO3A1	chr15:92396937-92715665	TTD7PVmother_nt	TTD7PV_nt	OK	4.16789	1.53394	-1.44208	-3.2239	5.00E-05	0.000948525	yes
SNCA	chr4:90645249-90763142	TTD7PVmother_nt	TTD7PV_nt	OK	0.81368	0.353459	-1.20291	-1.7694	0.00275	0.0271038	yes
SOGA3	chr6:127759550-127840500	TTD7PVmother_nt	TTD7PV_nt	OK	0.49295	0.203518	-1.27628	-2.3704	0.0003	0.00450245	yes

Gene	Location	Sample1	Sample2	Status	val1	val2	val3	val4	pval	padj	sig
SORBS2	chr4:186506597-186877870	TTD7PVmother_nt	TTD7PV_nt	OK	1.46862	0.270487	-2.44083	-3.9395	5.00E-05	0.000948525	yes
SORT1	chr1:109852187-109940563	TTD7PVmother_nt	TTD7PV_nt	OK	7.98407	2.19565	-1.86248	-5.5651	5.00E-05	0.000948525	yes
SOX9	chr17:70117160-70122560	TTD7PVmother_nt	TTD7PV_nt	OK	2.93712	7.37089	1.32744	3.97845	5.00E-05	0.000948525	yes
SP9	chr2:175199820-175202268	TTD7PVmother_nt	TTD7PV_nt	OK	7.16109	0.096643	-6.21138	-7.8359	0.00405	0.0370228	yes
SPEG	chr2:220299699-220358354	TTD7PVmother_nt	TTD7PV_nt	OK	11.7618	5.77422	-1.02641	-1.8472	0.0009	0.0110351	yes
SPINT2	chr19:38755097-38783254	TTD7PVmother_nt	TTD7PV_nt	OK	1.6515	0.646758	-1.35248	-1.9482	0.0018	0.0193091	yes
SPON1	chr11:13984183-14289679	TTD7PVmother_nt	TTD7PV_nt	OK	8.14221	3.74616	-1.12001	-3.3527	5.00E-05	0.000948525	yes
SPON2	chr4:1160720-1202750	TTD7PVmother_nt	TTD7PV_nt	OK	124.704	7.63915	-4.02895	-12.136	5.00E-05	0.000948525	yes
SPP1	chr4:88896801-88904563	TTD7PVmother_nt	TTD7PV_nt	OK	11.534	2.5052	-2.20289	-4.5426	5.00E-05	0.000948525	yes
SPTBN4	chr19:40973125-41082365	TTD7PVmother_nt	TTD7PV_nt	OK	0.60546	0.23609	-1.35868	-2.3104	5.00E-05	0.000948525	yes
SQRDL	chr15:45923345-45983492	TTD7PVmother_nt	TTD7PV_nt	OK	18.4028	9.13557	-1.01036	-2.7985	5.00E-05	0.000948525	yes
SRGN	chr10:70847827-70864567	TTD7PVmother_nt	TTD7PV_nt	OK	8.2191	2.03365	-2.01491	-3.4598	5.00E-05	0.000948525	yes
ST6GALNAC3	chr1:76540388-77096669	TTD7PVmother_nt	TTD7PV_nt	OK	0.16977	3.36473	4.30885	4.66062	5.00E-05	0.000948525	yes
STARD8	chrX:67867510-67945684	TTD7PVmother_nt	TTD7PV_nt	OK	1.01706	0.334942	-1.60242	-2.6583	5.00E-05	0.000948525	yes
STC1	chr8:23699433-23712320	TTD7PVmother_nt	TTD7PV_nt	OK	5.16938	2.349	-1.13794	-3.0774	5.00E-05	0.000948525	yes
STC2	chr5:172741725-172756506	TTD7PVmother_nt	TTD7PV_nt	OK	205.757	78.4832	-1.39049	-3.3388	5.00E-05	0.000948525	yes
STEAP1B	chr7:22459062-22539901	TTD7PVmother_nt	TTD7PV_nt	OK	6.12974	0.402589	-3.92844	-5.4746	5.00E-05	0.000948525	yes
STK17B	chr2:196998306-197036336	TTD7PVmother_nt	TTD7PV_nt	OK	7.76884	3.67877	-1.07847	-3.5532	5.00E-05	0.000948525	yes
STMN2	chr8:80523048-80578410	TTD7PVmother_nt	TTD7PV_nt	OK	200.81	6.34394	-4.98431	-12.535	5.00E-05	0.000948525	yes
STX1B	chr16:31000576-31021829	TTD7PVmother_nt	TTD7PV_nt	OK	1.02758	0.503266	-1.02986	-1.8939	0.00235	0.0239887	yes
STXBP2	chr19:7701986-7712760	TTD7PVmother_nt	TTD7PV_nt	OK	1.95292	0.268397	-2.86319	-3.4997	5.00E-05	0.000948525	yes
STXBP6	chr14:25281305-25519095	TTD7PVmother_nt	TTD7PV_nt	OK	2.48702	6.21599	1.32156	3.37462	5.00E-05	0.000948525	yes
SUSD5	chr3:33191536-33260707	TTD7PVmother_nt	TTD7PV_nt	OK	1.23544	0.258943	-2.25432	-4.0736	5.00E-05	0.000948525	yes
SVEP1	chr9:113127528-113342160	TTD7PVmother_nt	TTD7PV_nt	OK	18.1252	5.38465	-1.75108	-5.4867	5.00E-05	0.000948525	yes
SYBU	chr8:110586404-110704020	TTD7PVmother_nt	TTD7PV_nt	OK	4.98855	14.515	1.54085	4.21947	5.00E-05	0.000948525	yes
SYNPO2	chr4:119809995-119982402	TTD7PVmother_nt	TTD7PV_nt	OK	26.2425	2.84863	-3.20356	-9.0875	5.00E-05	0.000948525	yes
SYT14	chr1:210111518-210337633	TTD7PVmother_nt	TTD7PV_nt	OK	2.19479	5.47158	1.31787	3.61592	5.00E-05	0.000948525	yes
SYT7	chr11:61281187-61348344	TTD7PVmother_nt	TTD7PV_nt	OK	0.37741	0.844479	1.16194	1.94672	0.0015	0.0167911	yes
TACSTD2	chr1:59041094-59043166	TTD7PVmother_nt	TTD7PV_nt	OK	0.29811	1.61806	2.44037	3.98593	5.00E-05	0.000948525	yes
TBC1D4	chr13:75858808-76056250	TTD7PVmother_nt	TTD7PV_nt	OK	4.4031	2.18129	-1.01333	-3.0318	5.00E-05	0.000948525	yes
TBX1	chr22:19744225-19771112	TTD7PVmother_nt	TTD7PV_nt	OK	8.23641	0.499552	-4.04331	-7.0694	5.00E-05	0.000948525	yes
TBXA2R	chr19:3594503-3606831	TTD7PVmother_nt	TTD7PV_nt	OK	1.9785	0.878736	-1.1709	-2.2422	0.001	0.0119535	yes
TCEAL7	chrX:102585113-102587251	TTD7PVmother_nt	TTD7PV_nt	OK	10.4855	4.35464	-1.26777	-3.5795	5.00E-05	0.000948525	yes

TCF21	chr6:134210258-134216675	TTD7PVmother_nt	TTD7PV_nt	OK	0.19479	2.84177	3.86683	3.83971	5.00E-05	0.000948525	yes
TCTEX1D1	chr1:67218139-67244730	TTD7PVmother_nt	TTD7PV_nt	OK	1.03304	0.38429	-1.42663	-2.5339	0.00135	0.0154207	yes
TEKT4P2	chr21:9907188-9968593	TTD7PVmother_nt	TTD7PV_nt	OK	27.6257	7.73593	-1.83637	-4.5097	5.00E-05	0.000948525	yes
TFAP2A	chr6:10396915-10419797	TTD7PVmother_nt	TTD7PV_nt	OK	1.11338	0.110095	-3.33812	-4.5903	5.00E-05	0.000948525	yes
TFPI2	chr7:93514708-93520303	TTD7PVmother_nt	TTD7PV_nt	OK	84.2107	20.423	-2.04381	-6.7394	5.00E-05	0.000948525	yes
TGFA	chr2:70674411-70781147	TTD7PVmother_nt	TTD7PV_nt	OK	0.45441	0.09746	-2.22111	-2.8093	0.0002	0.00323166	yes
TGM2	chr20:36756863-36793700	TTD7PVmother_nt	TTD7PV_nt	OK	35.6287	5.62236	-2.66379	-6.8757	5.00E-05	0.000948525	yes
THBD	chr20:23026269-23030301	TTD7PVmother_nt	TTD7PV_nt	OK	13.1317	33.6978	1.3596	4.95933	5.00E-05	0.000948525	yes
THBS2	chr6:169615874-169654137	TTD7PVmother_nt	TTD7PV_nt	OK	181.307	70.4835	-1.36307	-3.3995	5.00E-05	0.000948525	yes
THEMIS2	chr1:28199054-28213193	TTD7PVmother_nt	TTD7PV_nt	OK	1.34179	0.576761	-1.21812	-1.5188	0.00475	0.0417883	yes
TIPARP	chr3:156390959-156424557	TTD7PVmother_nt	TTD7PV_nt	OK	11.9254	5.4363	-1.13334	-3.3107	5.00E-05	0.000948525	yes
TJP2	chr9:71736179-71870124	TTD7PVmother_nt	TTD7PV_nt	OK	2.05363	4.65019	1.17911	2.86883	5.00E-05	0.000948525	yes
TLR4	chr9:120466452-120479769	TTD7PVmother_nt	TTD7PV_nt	OK	2.34684	0.228879	-3.35806	-6.1199	5.00E-05	0.000948525	yes
TM4SF1	chr3:149086804-149095568	TTD7PVmother_nt	TTD7PV_nt	OK	11.4285	1.68398	-2.76268	-6.7682	5.00E-05	0.000948525	yes
TMEM150C	chr4:83405603-83483126	TTD7PVmother_nt	TTD7PV_nt	OK	0.52075	0.177183	-1.55536	-2.0591	0.00565	0.0478409	yes
TMEM155	chr4:122680084-122687963	TTD7PVmother_nt	TTD7PV_nt	OK	4.0581	9.46465	1.22175	3.3881	5.00E-05	0.000948525	yes
TMEM180	chr10:104221169-104236802	TTD7PVmother_nt	TTD7PV_nt	OK	1.0296	0.487025	-1.08002	-1.9419	0.00435	0.0390438	yes
TMEM229B	chr14:67936982-67982021	TTD7PVmother_nt	TTD7PV_nt	OK	0.58567	0.181251	-1.6921	-2.5512	0.00065	0.00852222	yes
TMEM255B	chr13:114462215-114514899	TTD7PVmother_nt	TTD7PV_nt	OK	9.63101	1.52017	-2.66346	-6.1505	5.00E-05	0.000948525	yes
TMEM35	chrX:100333835-100351355	TTD7PVmother_nt	TTD7PV_nt	OK	1.45078	0.49378	-1.55489	-2.5873	0.0003	0.00450245	yes
TMEM51	chr1:15479027-15546974	TTD7PVmother_nt	TTD7PV_nt	OK	0.72262	0.076917	-3.23186	-2.2193	5.00E-05	0.000948525	yes
TMEM59L	chr19:18723681-18731849	TTD7PVmother_nt	TTD7PV_nt	OK	3.11529	0.520603	-2.58111	-4.3653	5.00E-05	0.000948525	yes
TMTC1	chr12:29653745-29937692	TTD7PVmother_nt	TTD7PV_nt	OK	14.2521	4.59455	-1.63318	-4.7787	5.00E-05	0.000948525	yes
TNFAIP6	chr2:152214105-152236562	TTD7PVmother_nt	TTD7PV_nt	OK	6.86475	15.4734	1.17251	2.9344	5.00E-05	0.000948525	yes
TNFRSF14	chr1:2487207-2495267	TTD7PVmother_nt	TTD7PV_nt	OK	8.46328	2.77614	-1.60814	-3.4301	5.00E-05	0.000948525	yes
TNFRSF21	chr6:47199267-47277680	TTD7PVmother_nt	TTD7PV_nt	OK	10.9916	3.66241	-1.58554	-4.9452	5.00E-05	0.000948525	yes
TNFSF4	chr1:173152869-173176471	TTD7PVmother_nt	TTD7PV_nt	OK	1.11328	0.28359	-1.97294	-3.4498	5.00E-05	0.000948525	yes
TOX	chr8:59717976-60031767	TTD7PVmother_nt	TTD7PV_nt	OK	0.13382	3.58582	4.74396	7.71038	5.00E-05	0.000948525	yes
TP53I11	chr11:44785975-44972857	TTD7PVmother_nt	TTD7PV_nt	OK	15.7156	4.91924	-1.67569	-2.528	5.00E-05	0.000948525	yes
TPD52	chr8:80947104-81083836	TTD7PVmother_nt	TTD7PV_nt	OK	0.07551	1.04569	3.79162	4.67649	5.00E-05	0.000948525	yes
TRPC3	chr4:122800182-122872909	TTD7PVmother_nt	TTD7PV_nt	OK	0.1169	0.562814	2.26742	2.85517	0.0001	0.00172182	yes
TRPV2	chr17:16318855-16340317	TTD7PVmother_nt	TTD7PV_nt	OK	6.36265	0.561976	-3.50105	-6.817	5.00E-05	0.000948525	yes
TSPAN10	chr17:79609348-79615779	TTD7PVmother_nt	TTD7PV_nt	OK	3.42324	1.69835	-1.01123	-2.2454	0.00305	0.0293851	yes

Gene	Location	Sample 1	Sample 2	Status	Value1	Value2	log2FC	stat	pval	padj	sig
TSPAN13	chr7:16793350-16824161	TTD7PVmother_nt	TTD7PV_nt	OK	6.71023	2.20272	-1.60707	-4.2555	5.00E-05	0.000948525	yes
TSPAN2	chr1:115590632-115632121	TTD7PVmother_nt	TTD7PV_nt	OK	1.24413	0.542489	-1.19747	-2.2748	0.0016	0.0176494	yes
TSPAN8	chr12:71518876-71551779	TTD7PVmother_nt	TTD7PV_nt	OK	0.32113	2.47883	2.94845	4.95911	0.00015	0.00249264	yes
TTC12	chr11:113185250-113237114	TTD7PVmother_nt	TTD7PV_nt	OK	0.34974	2.27989	2.70461	4.39352	5.00E-05	0.000948525	yes
TYW1B	chr7:72023728-72298813	TTD7PVmother_nt	TTD7PV_nt	OK	0.28017	1.12033	1.99954	2.86688	5.00E-05	0.000948525	yes
UCHL1	chr4:41258897-41270446	TTD7PVmother_nt	TTD7PV_nt	OK	183.968	412.162	1.16375	4.51807	5.00E-05	0.000948525	yes
ULBP1	chr6:150285142-150294846	TTD7PVmother_nt	TTD7PV_nt	OK	3.23612	9.56167	1.563	4.23553	5.00E-05	0.000948525	yes
USP53	chr4:120133781-120216673	TTD7PVmother_nt	TTD7PV_nt	OK	17.5468	8.5755	-1.03292	-3.488	5.00E-05	0.000948525	yes
VAMP1	chr12:6561176-6579843	TTD7PVmother_nt	TTD7PV_nt	OK	7.04566	2.55494	-1.46345	-2.0117	0.0016	0.0176494	yes
VIT	chr2:36923832-37041937	TTD7PVmother_nt	TTD7PV_nt	OK	6.20462	0.453921	-3.77283	-5.7514	5.00E-05	0.000948525	yes
WARS	chr14:100800124-100842680	TTD7PVmother_nt	TTD7PV_nt	OK	83.6578	168.075	1.00653	2.76578	5.00E-05	0.000948525	yes
WISP1	chr8:134203281-134243932	TTD7PVmother_nt	TTD7PV_nt	OK	16.1645	34.1607	1.07951	3.3401	5.00E-05	0.000948525	yes
WISP2	chr20:43343884-43356452	TTD7PVmother_nt	TTD7PV_nt	OK	321.903	20.9801	-3.93953	-12.705	5.00E-05	0.000948525	yes
WNK4	chr17:40932648-40949084	TTD7PVmother_nt	TTD7PV_nt	OK	3.3567	0.272402	-3.62323	-5.75	5.00E-05	0.000948525	yes
WNT4	chr1:22443797-22469519	TTD7PVmother_nt	TTD7PV_nt	OK	1.26139	0.145119	-3.1197	-4.5156	5.00E-05	0.000948525	yes
WNT5B	chr12:1726221-1756378	TTD7PVmother_nt	TTD7PV_nt	OK	64.2678	21.9474	-1.55005	-4.7919	5.00E-05	0.000948525	yes
XG	chrX:2670092-2734541	TTD7PVmother_nt	TTD7PV_nt	OK	25.7924	9.48844	-1.4427	-4.8165	5.00E-05	0.000948525	yes
XPNPEP2	chrX:128872945-128903525	TTD7PVmother_nt	TTD7PV_nt	OK	1.7466	8.21925	2.23445	5.52017	5.00E-05	0.000948525	yes
ZDHHC23	chr3:113666747-113681827	TTD7PVmother_nt	TTD7PV_nt	OK	1.01663	0.46992	-1.11331	-2.0303	0.00195	0.0205581	yes
ZFPM2	chr8:106331146-106816767	TTD7PVmother_nt	TTD7PV_nt	OK	4.57716	0.83977	-2.44639	-5.509	5.00E-05	0.000948525	yes
ZIC4	chr3:147103834-147124596	TTD7PVmother_nt	TTD7PV_nt	OK	0.04164	1.48733	5.15859	3.57072	5.00E-05	0.000948525	yes
ZNF273	chr7:64363619-64391955	TTD7PVmother_nt	TTD7PV_nt	OK	0.70586	0.254975	-1.46902	-2.3952	0.0001	0.00172182	yes
ZNF385B	chr2:180306710-180726232	TTD7PVmother_nt	TTD7PV_nt	OK	0.07728	0.848017	3.45594	3.22416	5.00E-05	0.000948525	yes
ZNF608	chr5:123972609-124080805	TTD7PVmother_nt	TTD7PV_nt	OK	0.46165	0.076368	-2.59577	-3.4888	5.00E-05	0.000948525	yes
ZNF702P	chr19:53471503-53496784	TTD7PVmother_nt	TTD7PV_nt	OK	1.1967	0.184426	-2.69795	-4.1685	5.00E-05	0.000948525	yes
ZNF711	chrX:84498996-84528368	TTD7PVmother_nt	TTD7PV_nt	OK	0.30698	0.676225	1.13938	1.88977	0.0046	0.0408317	yes
ZNF804A	chr2:185463092-185804214	TTD7PVmother_nt	TTD7PV_nt	OK	0.16825	1.29104	2.93988	4.89199	5.00E-05	0.000948525	yes

Table S2. The most significant differentially expressed genes (P-value ≤ 0.05) for TTD7PVmother versus TTD7PV fibroblasts upon UV irradiation by RNA-seq

test_id	locus	sample_1	sample_2	status	value_1	value_2	log2(FC)	test_stat	p_value	q_value	significant
A2M	chr12:9217772-9268558	TTD7PVmother_uv	TTD7PV_uv	OK	1.52284	0.430276	-1.82343	-2.85205	0.0002	0.00284504	yes
AARD	chr8:117950463-117956239	TTD7PVmother_uv	TTD7PV_uv	OK	0.950153	0.264253	-1.84624	-2.64737	0.00085	0.00936112	yes
ABAT	chr16:8768443-8878432	TTD7PVmother_uv	TTD7PV_uv	OK	4.64583	1.36945	-1.76234	-4.41025	5.00E-05	0.000851213	yes
ABCC9	chr12:21950323-22089628	TTD7PVmother_uv	TTD7PV_uv	OK	6.97797	1.44135	-2.27539	-6.73859	5.00E-05	0.000851213	yes
ABLIM1	chr10:116190868-116444414	TTD7PVmother_uv	TTD7PV_uv	OK	0.697137	0.316855	-1.13762	-2.16618	0.0002	0.00284504	yes
ACBD7	chr10:15117473-15130775	TTD7PVmother_uv	TTD7PV_uv	OK	0.366453	0.89426	1.28707	2.3637	0.00045	0.00555117	yes
ACOT1	chr14:73945188-74025651	TTD7PVmother_uv	TTD7PV_uv	OK	9.94537	3.25485	-1.61143	-2.90412	5.00E-05	0.000851213	yes
ADAMTS7	chr15:79051544-79103773	TTD7PVmother_uv	TTD7PV_uv	OK	13.3688	5.23042	-1.35387	-4.22599	5.00E-05	0.000851213	yes
ADARB1	chr21:46494492-46646478	TTD7PVmother_uv	TTD7PV_uv	OK	6.64512	2.83128	-1.23084	-3.25214	5.00E-05	0.000851213	yes
ADCY4	chr14:24787554-24804277	TTD7PVmother_uv	TTD7PV_uv	OK	3.97065	1.18093	-1.74945	-3.80925	5.00E-05	0.000851213	yes
ADD2	chr2:70889215-70995375	TTD7PVmother_uv	TTD7PV_uv	OK	0.590122	1.99578	1.75786	3.00926	5.00E-05	0.000851213	yes
ADH1B	chr4:100227526-100242572	TTD7PVmother_uv	TTD7PV_uv	OK	0.931315	4.02521	2.11172	4.31614	5.00E-05	0.000851213	yes
ADM	chr11:10326641-10328923	TTD7PVmother_uv	TTD7PV_uv	OK	231.492	62.266	-1.89445	-7.1941	5.00E-05	0.000851213	yes
ADRA1B	chr5:159343739-159400017	TTD7PVmother_uv	TTD7PV_uv	OK	0.52196	1.54011	1.56102	2.91711	0.00025	0.00340302	yes
ADRA2A	chr10:112836789-112840662	TTD7PVmother_uv	TTD7PV_uv	OK	17.6498	2.75229	-2.68095	-8.22116	5.00E-05	0.000851213	yes
AFF2	chrX:147582138-148082193	TTD7PVmother_uv	TTD7PV_uv	OK	0.645679	1.29963	1.00922	2.58991	5.00E-05	0.000851213	yes
AFF3	chr2:100163715-100759037	TTD7PVmother_uv	TTD7PV_uv	OK	0.859116	2.26038	1.39564	3.26434	5.00E-05	0.000851213	yes
AGTR1	chr3:148415657-148460790	TTD7PVmother_uv	TTD7PV_uv	OK	0.477224	3.86252	3.0168	5.19801	5.00E-05	0.000851213	yes
AHR	chr7:17338275-17385775	TTD7PVmother_uv	TTD7PV_uv	OK	5.51531	2.55833	-1.10824	-3.48898	5.00E-05	0.000851213	yes
AIM1	chr6:106959729-107018334	TTD7PVmother_uv	TTD7PV_uv	OK	1.16744	2.93692	1.33095	3.58087	5.00E-05	0.000851213	yes
AKAP2	chr9:112403067-112934791	TTD7PVmother_uv	TTD7PV_uv	OK	57.7924	28.7928	-1.00517	-2.64574	5.00E-05	0.000851213	yes
AKR1C2	chr10:5029967-5060225	TTD7PVmother_uv	TTD7PV_uv	OK	25.6547	10.8687	-1.23904	-3.48911	5.00E-05	0.000851213	yes
ALDH1A1	chr9:75515577-75568233	TTD7PVmother_uv	TTD7PV_uv	OK	0.30471	1.0351	1.76426	2.68115	0.0005	0.00606142	yes
ALDH1A3	chr15:101420008-101456830	TTD7PVmother_uv	TTD7PV_uv	OK	59.8689	215.968	1.85094	5.58943	5.00E-05	0.000851213	yes
ALDH1B1	chr9:38392660-38398662	TTD7PVmother_uv	TTD7PV_uv	OK	33.6117	12.6644	-1.40818	-4.51698	5.00E-05	0.000851213	yes
ALDH2	chr12:112204690-112247789	TTD7PVmother_uv	TTD7PV_uv	OK	25.3649	68.6364	1.43614	4.4823	5.00E-05	0.000851213	yes
ALDH3B1	chr11:67776047-67796743	TTD7PVmother_uv	TTD7PV_uv	OK	18.4272	6.0333	-1.61082	-4.73448	5.00E-05	0.000851213	yes
ALS2CL	chr3:46710484-46735194	TTD7PVmother_uv	TTD7PV_uv	OK	1.1765	0.228269	-2.3657	-3.77933	5.00E-05	0.000851213	yes
AMIGO1	chr1:110049445-110052336	TTD7PVmother_uv	TTD7PV_uv	OK	0.971133	0.145638	-2.73729	-3.79324	5.00E-05	0.000851213	yes
AMIGO2	chr12:47469489-47473734	TTD7PVmother_uv	TTD7PV_uv	OK	18.2828	8.79016	-1.05652	-2.99488	5.00E-05	0.000851213	yes
AMPD3	chr11:10471867-10529126	TTD7PVmother_uv	TTD7PV_uv	OK	4.77333	1.69759	-1.49151	-3.76068	5.00E-05	0.000851213	yes
ANGPT1	chr8:108261709-108510254	TTD7PVmother_uv	TTD7PV_uv	OK	4.24164	0.859519	-2.30302	-5.27843	5.00E-05	0.000851213	yes
ANGPTL4	chr19:8429010-8439257	TTD7PVmother_uv	TTD7PV_uv	OK	45.2612	10.6133	-2.0924	-6.13833	5.00E-05	0.000851213	yes
ANKRD33B	chr5:10564434-10657928	TTD7PVmother_uv	TTD7PV_uv	OK	0.547212	0.245433	-1.15677	-2.26578	0.00045	0.00555117	yes
ANO4	chr12:101188373-101522419	TTD7PVmother_uv	TTD7PV_uv	OK	1.14636	0.390158	-1.55493	-2.98779	5.00E-05	0.000851213	yes

Gene	Location	Sample1	Sample2	Status	Val1	Val2	Val3	Val4	Val5	Val6	Sig
ANP32A	chr15:69070874-69113261	TTD7PVmother_uv	TTD7PV_uv	OK	10.9588	23.6534	1.10996	3.78594	5.00E-05	0.000851213	yes
AP1S2	chrX:15843928-15873137	TTD7PVmother_uv	TTD7PV_uv	OK	20.359	8.8773	-1.19748	-3.81703	5.00E-05	0.000851213	yes
APBA1	chr9:72042448-72287275	TTD7PVmother_uv	TTD7PV_uv	OK	0.920413	0.452691	-1.02376	-2.11842	0.0006	0.00701778	yes
APBB1IP	chr10:26727265-26856732	TTD7PVmother_uv	TTD7PV_uv	OK	24.4563	5.83912	-2.06638	-6.64009	5.00E-05	0.000851213	yes
APCDD1	chr18:10454624-10488698	TTD7PVmother_uv	TTD7PV_uv	OK	3.78353	1.52823	-1.30787	-3.00134	5.00E-05	0.000851213	yes
APCDD1L	chr20:57034425-57089949	TTD7PVmother_uv	TTD7PV_uv	OK	6.60429	0.954329	-2.79084	-6.7716	5.00E-05	0.000851213	yes
APOL1	chr22:36649116-36663577	TTD7PVmother_uv	TTD7PV_uv	OK	4.22048	0.367587	-3.52125	-5.89482	5.00E-05	0.000851213	yes
AQP1	chr7:30951414-30965131	TTD7PVmother_uv	TTD7PV_uv	OK	1.31947	0.432841	-1.60805	-2.55498	5.00E-05	0.000851213	yes
AR	chrX:66763873-66950461	TTD7PVmother_uv	TTD7PV_uv	OK	0.935597	0.0557363	-4.0692	-6.31396	5.00E-05	0.000851213	yes
ARC	chr8:143692404-143695833	TTD7PVmother_uv	TTD7PV_uv	OK	9.85971	3.5021	-1.49332	-4.33446	5.00E-05	0.000851213	yes
ARHGAP22	chr10:49654067-49864310	TTD7PVmother_uv	TTD7PV_uv	OK	6.5942	2.60795	-1.33828	-3.22129	5.00E-05	0.000851213	yes
ARHGAP23	chr17:36584719-36668628	TTD7PVmother_uv	TTD7PV_uv	OK	21.4759	43.9557	1.03333	3.41901	5.00E-05	0.000851213	yes
ARHGAP5-AS1	chr14:32544624-32545905	TTD7PVmother_uv	TTD7PV_uv	OK	1.75832	0.772865	-1.18591	-2.28425	0.0038	0.031251	yes
ARHGEF28	chr5:72921982-73237818	TTD7PVmother_uv	TTD7PV_uv	OK	1.82098	0.521971	-1.80267	-3.77867	5.00E-05	0.000851213	yes
ARL4D	chr17:41476352-41478504	TTD7PVmother_uv	TTD7PV_uv	OK	30.2666	11.284	-1.42345	-4.95695	5.00E-05	0.000851213	yes
ARRB1	chr11:74971165-75062875	TTD7PVmother_uv	TTD7PV_uv	OK	1.17994	0.285815	-2.04555	-3.95705	5.00E-05	0.000851213	yes
ARRDC4	chr15:98503932-98517068	TTD7PVmother_uv	TTD7PV_uv	OK	3.73007	1.48325	-1.33044	-3.51847	5.00E-05	0.000851213	yes
ASNS	chr7:97481428-97501854	TTD7PVmother_uv	TTD7PV_uv	OK	44.1554	107.873	1.28868	3.82662	5.00E-05	0.000851213	yes
ASPHD1	chr16:29912146-29917377	TTD7PVmother_uv	TTD7PV_uv	OK	3.31486	1.51634	-1.12836	-2.40271	0.00095	0.0102305	yes
ASS1	chr9:133320093-133376661	TTD7PVmother_uv	TTD7PV_uv	OK	16.4517	52.3805	1.6708	4.77038	5.00E-05	0.000851213	yes
ATF5	chr19:50392912-50437193	TTD7PVmother_uv	TTD7PV_uv	OK	102.628	42.804	-1.2616	-3.19904	5.00E-05	0.000851213	yes
ATP13A3	chr3:194123402-194188968	TTD7PVmother_uv	TTD7PV_uv	OK	44.2476	20.2746	-1.12593	-3.88875	5.00E-05	0.000851213	yes
ATP8B4	chr15:50150434-50411419	TTD7PVmother_uv	TTD7PV_uv	OK	0.778892	0.217481	-1.84053	-3.13179	5.00E-05	0.000851213	yes
B3GALT4	chr6_qbl_hap6:4477155-4478841	TTD7PVmother_uv	TTD7PV_uv	OK	1.93583	0.80185	-1.27155	-2.45366	0.0012	0.0124046	yes
B3GNT2	chr2:62423261-62451866	TTD7PVmother_uv	TTD7PV_uv	OK	4.66353	2.06076	-1.17824	-2.76402	5.00E-05	0.000851213	yes
B3GNT8	chr19:41931263-41934635	TTD7PVmother_uv	TTD7PV_uv	OK	2.54687	0.904505	-1.49353	-3.08609	5.00E-05	0.000851213	yes
BAI2	chr1:32192717-32229648	TTD7PVmother_uv	TTD7PV_uv	OK	3.11821	1.18345	-1.39771	-3.44448	5.00E-05	0.000851213	yes
BCHE	chr3:165490691-165555253	TTD7PVmother_uv	TTD7PV_uv	OK	1.54009	6.00409	1.96293	4.89581	5.00E-05	0.000851213	yes
BEAN1	chr16:66461199-66527432	TTD7PVmother_uv	TTD7PV_uv	OK	1.0333	0.11025	-3.22841	-2.37592	5.00E-05	0.000851213	yes
BEX2	chrX:102564273-102565974	TTD7PVmother_uv	TTD7PV_uv	OK	0.868505	3.20389	1.88322	2.50456	0.00015	0.00220839	yes
BMP2	chr20:6748744-6760910	TTD7PVmother_uv	TTD7PV_uv	OK	2.60866	0.6973	-1.90346	-4.02792	5.00E-05	0.000851213	yes
BMP4	chr14:54416454-54423554	TTD7PVmother_uv	TTD7PV_uv	OK	0.708039	0.0976596	-2.858	-2.19159	0.0006	0.00701778	yes
BTN2A2	chr6:26383323-26395100	TTD7PVmother_uv	TTD7PV_uv	OK	2.75186	1.25859	-1.12859	-2.24057	5.00E-05	0.000851213	yes
BTN3A2	chr6:26365397-26378548	TTD7PVmother_uv	TTD7PV_uv	OK	2.21323	4.5177	1.02944	2.46428	5.00E-05	0.000851213	yes
C11orf87	chr11:109292845-109299893	TTD7PVmother_uv	TTD7PV_uv	OK	0.934176	2.92162	1.645	4.43485	5.00E-05	0.000851213	yes
C15orf39	chr15:75494220-75504510	TTD7PVmother_uv	TTD7PV_uv	OK	9.98978	4.19079	-1.25323	-3.96736	5.00E-05	0.000851213	yes
C17orf97	chr17:260117-264457	TTD7PVmother_uv	TTD7PV_uv	OK	1.11566	2.55002	1.19261	2.53544	0.00055	0.00656053	yes

C1orf115	chr1:220863627-220872499	TTD7PVmother_uv	TTD7PV_uv	OK	3.39137	0.618734	-2.45448	-5.05966	5.00E-05	0.000851213	yes
C1orf198	chr1:230972864-231005335	TTD7PVmother_uv	TTD7PV_uv	OK	47.7942	19.5052	-1.29298	-3.95671	5.00E-05	0.000851213	yes
C1orf54	chr1:150245182-150253335	TTD7PVmother_uv	TTD7PV_uv	OK	2.0117	5.6945	1.50115	4.28306	0.0014	0.0141027	yes
C1QTNF1	chr17:77015290-77045870	TTD7PVmother_uv	TTD7PV_uv	OK	6.36637	1.56252	-2.0266	-4.63388	5.00E-05	0.000851213	yes
C21orf7	chr21:30452872-30548202	TTD7PVmother_uv	TTD7PV_uv	OK	9.64783	4.01269	-1.26563	-3.75062	5.00E-05	0.000851213	yes
C2orf74	chr2:61372242-61391964	TTD7PVmother_uv	TTD7PV_uv	OK	4.45218	10.6407	1.25701	2.31286	5.00E-05	0.000851213	yes
C2orf88	chr2:191002485-191068210	TTD7PVmother_uv	TTD7PV_uv	OK	0.800392	0.297894	-1.42591	-2.41848	0.00015	0.00220839	yes
C3	chr19:6677845-6720662	TTD7PVmother_uv	TTD7PV_uv	OK	1.87264	4.09972	1.13045	2.82277	5.00E-05	0.000851213	yes
C3orf55	chr3:157261132-157319021	TTD7PVmother_uv	TTD7PV_uv	OK	6.01258	1.48559	-2.01695	-3.43984	5.00E-05	0.000851213	yes
C3orf72	chr3:138666075-138672830	TTD7PVmother_uv	TTD7PV_uv	OK	1.46064	0.191433	-2.93169	-5.17932	5.00E-05	0.000851213	yes
C5AR1	chr19:47813103-47825327	TTD7PVmother_uv	TTD7PV_uv	OK	0.344526	0.815811	1.24362	2.09508	0.0041	0.0331146	yes
C5AR2	chr19:47835403-47845272	TTD7PVmother_uv	TTD7PV_uv	OK	1.29003	0.242704	-2.41013	-2.585	0.0001	0.00155758	yes
C7orf60	chr7:112459201-112579932	TTD7PVmother_uv	TTD7PV_uv	OK	6.38275	2.75971	-1.20966	-3.83332	5.00E-05	0.000851213	yes
C8orf58	chr8:22457113-22461662	TTD7PVmother_uv	TTD7PV_uv	OK	7.7722	3.63701	-1.09557	-2.62817	5.00E-05	0.000851213	yes
CABLES1	chr18:20714527-20840434	TTD7PVmother_uv	TTD7PV_uv	OK	7.92456	3.73623	-1.08475	-3.22765	5.00E-05	0.000851213	yes
CADM1	chr11:115044344-115375241	TTD7PVmother_uv	TTD7PV_uv	OK	0.266796	0.687527	1.36568	2.26588	0.00065	0.00748478	yes
CALB2	chr16:71392615-71424342	TTD7PVmother_uv	TTD7PV_uv	OK	0.821033	0.143306	-2.51835	-2.0974	0.0006	0.00701778	yes
CAMK2N1	chr1:20808883-20812728	TTD7PVmother_uv	TTD7PV_uv	OK	31.3075	12.8473	-1.28505	-4.81237	5.00E-05	0.000851213	yes
CCDC163P	chr1:45959597-45965751	TTD7PVmother_uv	TTD7PV_uv	OK	0.418272	1.01638	1.28093	1.90905	0.002	0.0187558	yes
CCDC51	chr3:48473579-48481529	TTD7PVmother_uv	TTD7PV_uv	OK	13.1392	4.62336	-1.50686	-3.41031	5.00E-05	0.000851213	yes
CCDC69	chr5:150560612-150603654	TTD7PVmother_uv	TTD7PV_uv	OK	1.95892	0.772863	-1.34177	-2.78818	5.00E-05	0.000851213	yes
CCDC8	chr19:46913585-46916919	TTD7PVmother_uv	TTD7PV_uv	OK	9.42266	3.90014	-1.27261	-3.72586	5.00E-05	0.000851213	yes
CCDC81	chr11:86085777-86134151	TTD7PVmother_uv	TTD7PV_uv	OK	0.47344	0.0747061	-2.66388	-2.29984	0.0004	0.00504775	yes
CCL2	chr17:32582295-32584220	TTD7PVmother_uv	TTD7PV_uv	OK	20.1011	8.02054	-1.3255	-4.32846	5.00E-05	0.000851213	yes
CCND2	chr12:4382901-4414522	TTD7PVmother_uv	TTD7PV_uv	OK	0.189279	0.647946	1.77536	3.05309	0.0001	0.00155758	yes
CCR7	chr17:38710021-38721736	TTD7PVmother_uv	TTD7PV_uv	OK	1.95577	0.193704	-3.33581	-5.07498	5.00E-05	0.000851213	yes
CCRL1	chr3:132276981-132593050	TTD7PVmother_uv	TTD7PV_uv	OK	39.2396	14.063	-1.4804	-2.16501	0.0069	0.0491601	yes
CD36	chr7:80231503-80308593	TTD7PVmother_uv	TTD7PV_uv	OK	6.4965	1.27459	-2.34963	-4.34436	5.00E-05	0.000851213	yes
CD82	chr11:44587140-44641315	TTD7PVmother_uv	TTD7PV_uv	OK	4.76367	1.65828	-1.52239	-2.96277	5.00E-05	0.000851213	yes
CDA	chr1:20915443-20945400	TTD7PVmother_uv	TTD7PV_uv	OK	11.5514	3.49908	-1.72302	-4.68243	5.00E-05	0.000851213	yes
CDC45	chr22:19467413-19508135	TTD7PVmother_uv	TTD7PV_uv	OK	2.60979	5.71266	1.13023	2.44263	5.00E-05	0.000851213	yes
CDCA7	chr2:174219560-174233718	TTD7PVmother_uv	TTD7PV_uv	OK	0.322665	1.26422	1.97014	3.07035	5.00E-05	0.000851213	yes
CDH10	chr5:24487208-24645085	TTD7PVmother_uv	TTD7PV_uv	OK	2.75897	5.81512	1.07568	3.03697	5.00E-05	0.000851213	yes
CDH18	chr5:19473154-19988353	TTD7PVmother_uv	TTD7PV_uv	OK	1.15847	7.9904	2.78604	6.11496	5.00E-05	0.000851213	yes
CDH6	chr5:31193761-31329253	TTD7PVmother_uv	TTD7PV_uv	OK	0.610486	1.8607	1.60781	3.95019	5.00E-05	0.000851213	yes
CDK15	chr2:202671151-202760273	TTD7PVmother_uv	TTD7PV_uv	OK	0.652579	2.40982	1.8847	3.43509	5.00E-05	0.000851213	yes
CEBPA	chr19:33790839-33793430	TTD7PVmother_uv	TTD7PV_uv	OK	0.54887	1.29541	1.23887	2.36465	0.0009	0.0098346	yes

Gene	Location	Sample1	Sample2	Status	Val1	Val2	Val3	Val4	Val5	Val6	Sig
CECR1	chr22:17660191-17690779	TTD7PVmother_uv	TTD7PV_uv	OK	2.51547	5.09055	1.01699	2.57725	0.00015	0.00220839	yes
CECR7	chr22:17517459-17539682	TTD7PVmother_uv	TTD7PV_uv	OK	0.603564	2.07741	1.78321	3.5612	5.00E-05	0.000851213	yes
CERS4	chr19:8274216-8327304	TTD7PVmother_uv	TTD7PV_uv	OK	2.62729	0.797558	-1.71992	-3.48764	5.00E-05	0.000851213	yes
CFI	chr4:110661847-110723335	TTD7PVmother_uv	TTD7PV_uv	OK	0.425965	1.28953	1.59803	2.67166	0.0005	0.00606142	yes
CHDH	chr3:53850323-53880420	TTD7PVmother_uv	TTD7PV_uv	OK	0.64081	0.302604	-1.08247	-1.79709	0.00535	0.0408099	yes
CILP2	chr19:19649073-19657468	TTD7PVmother_uv	TTD7PV_uv	OK	1.13548	0.426559	-1.41249	-2.7055	5.00E-05	0.000851213	yes
CITED4	chr1:41326727-41328018	TTD7PVmother_uv	TTD7PV_uv	OK	1.259	0.478578	-1.39545	-2.54578	0.00515	0.039571	yes
CLCA2	chr1:86889768-86922240	TTD7PVmother_uv	TTD7PV_uv	OK	0.628613	0.149712	-2.06998	-3.15735	5.00E-05	0.000851213	yes
CLCN4	chrX:10124984-10205699	TTD7PVmother_uv	TTD7PV_uv	OK	0.516231	0.124071	-2.05685	-3.35207	5.00E-05	0.000851213	yes
CLDN23	chr8:8559665-8561617	TTD7PVmother_uv	TTD7PV_uv	OK	2.57976	0.599452	-2.10552	-4.11522	5.00E-05	0.000851213	yes
CLDN4	chr7:73245192-73247015	TTD7PVmother_uv	TTD7PV_uv	OK	7.46516	1.49358	-2.3214	-5.59446	5.00E-05	0.000851213	yes
CLEC3B	chr3:45067758-45077563	TTD7PVmother_uv	TTD7PV_uv	OK	38.8821	11.8468	-1.71461	-5.9839	5.00E-05	0.000851213	yes
CLGN	chr4:141309606-141348815	TTD7PVmother_uv	TTD7PV_uv	OK	2.45761	14.0738	2.51768	6.24175	5.00E-05	0.000851213	yes
CLIC3	chr9:139889059-139891024	TTD7PVmother_uv	TTD7PV_uv	OK	36.7086	9.34935	-1.97318	-7.27308	5.00E-05	0.000851213	yes
CLU	chr8:27454433-27472328	TTD7PVmother_uv	TTD7PV_uv	OK	353.501	132.755	-1.41295	-3.52827	5.00E-05	0.000851213	yes
CMAHP	chr6:25081294-25138620	TTD7PVmother_uv	TTD7PV_uv	OK	2.80616	1.36497	-1.03972	-1.87715	0.00095	0.0102305	yes
CNN1	chr19:11649578-11661138	TTD7PVmother_uv	TTD7PV_uv	OK	34.8753	14.2162	-1.29467	-3.92339	5.00E-05	0.000851213	yes
COL11A1	chr1:103342022-103574052	TTD7PVmother_uv	TTD7PV_uv	OK	13.6891	0.771017	-4.15012	-7.40743	5.00E-05	0.000851213	yes
COL14A1	chr8:121137346-121384273	TTD7PVmother_uv	TTD7PV_uv	OK	3.34017	10.685	1.67759	4.9206	5.00E-05	0.000851213	yes
COL4A1	chr13:110801309-110959496	TTD7PVmother_uv	TTD7PV_uv	OK	35.093	4.10117	-3.09707	-7.53382	5.00E-05	0.000851213	yes
COL4A2	chr13:110959630-111165373	TTD7PVmother_uv	TTD7PV_uv	OK	69.8745	11.5617	-2.59541	-5.97491	5.00E-05	0.000851213	yes
COL7A1	chr3:48601505-48632593	TTD7PVmother_uv	TTD7PV_uv	OK	2.96446	1.05577	-1.48947	-3.79825	5.00E-05	0.000851213	yes
COMP	chr19:18893582-18902114	TTD7PVmother_uv	TTD7PV_uv	OK	151.554	66.5524	-1.18727	-2.98076	5.00E-05	0.000851213	yes
CPB1	chr3:148545587-148577972	TTD7PVmother_uv	TTD7PV_uv	OK	0.152212	1.9645	3.69001	4.68187	0.0001	0.00155758	yes
CPM	chr12:69244955-69357020	TTD7PVmother_uv	TTD7PV_uv	OK	1.67946	0.746554	-1.16968	-2.78176	5.00E-05	0.000851213	yes
CPN2	chr3:194060493-194072057	TTD7PVmother_uv	TTD7PV_uv	OK	0.711133	0.0716136	-3.31181	-4.04018	0.00025	0.00340302	yes
CPXM2	chr10:125505151-125651500	TTD7PVmother_uv	TTD7PV_uv	OK	5.28662	0.970306	-2.44583	-5.42937	5.00E-05	0.000851213	yes
CRABP2	chr1:156669399-156675608	TTD7PVmother_uv	TTD7PV_uv	OK	76.2804	306.54	2.00669	5.69589	5.00E-05	0.000851213	yes
CRIP2	chr14:105939274-105946507	TTD7PVmother_uv	TTD7PV_uv	OK	31.6888	15.6624	-1.01667	-2.77067	5.00E-05	0.000851213	yes
CRLF1	chr19:18704034-18717660	TTD7PVmother_uv	TTD7PV_uv	OK	101.763	9.98594	-3.34916	-9.47806	5.00E-05	0.000851213	yes
CRYAB	chr11:111779349-111782473	TTD7PVmother_uv	TTD7PV_uv	OK	329.257	110.884	-1.57016	-8.18877	5.00E-05	0.000851213	yes
CRYZ	chr1:75171171-75232360	TTD7PVmother_uv	TTD7PV_uv	OK	12.0274	4.23351	-1.5064	-3.14172	0.0001	0.00155758	yes
CSRP2	chr12:77252495-77272799	TTD7PVmother_uv	TTD7PV_uv	OK	42.6202	13.5618	-1.65199	-5.56813	5.00E-05	0.000851213	yes
CTGF	chr6:132269316-132272518	TTD7PVmother_uv	TTD7PV_uv	OK	2221.44	784.702	-1.50128	-2.79894	0.00015	0.00220839	yes
CTH	chr1:70876900-70905534	TTD7PVmother_uv	TTD7PV_uv	OK	4.1952	9.2477	1.14035	2.88615	5.00E-05	0.000851213	yes
CTSC	chr11:88026759-88070941	TTD7PVmother_uv	TTD7PV_uv	OK	7.53148	16.3605	1.11921	3.07061	5.00E-05	0.000851213	yes
CTXN1	chr19:7989380-7991051	TTD7PVmother_uv	TTD7PV_uv	OK	9.07852	4.36505	-1.05646	-3.15838	0.00015	0.00220839	yes

CYGB	chr17:74523429-74541458	TTD7PVmother_uv	TTD7PV_uv	OK	22.3545	10.9889	-1.02452	-3.33804	5.00E-05	0.000851213	yes
CYP26B1	chr2:72356366-72374963	TTD7PVmother_uv	TTD7PV_uv	OK	1.45939	5.70478	1.96681	5.30041	5.00E-05	0.000851213	yes
CYP2E1	chr10:135340866-135352620	TTD7PVmother_uv	TTD7PV_uv	OK	1.99831	0.492406	-2.02086	-3.57481	5.00E-05	0.000851213	yes
CYR61	chr1:86046443-86049648	TTD7PVmother_uv	TTD7PV_uv	OK	1191.26	503.406	-1.24269	-2.79485	5.00E-05	0.000851213	yes
CYTL1	chr4:5016313-5021197	TTD7PVmother_uv	TTD7PV_uv	OK	1.58715	5.58828	1.81596	3.9493	5.00E-05	0.000851213	yes
DAAM2	chr6:39760158-39902290	TTD7PVmother_uv	TTD7PV_uv	OK	7.64455	3.29494	-1.21418	-3.20678	5.00E-05	0.000851213	yes
DAPK1	chr9:90112755-90323549	TTD7PVmother_uv	TTD7PV_uv	OK	4.26601	0.507445	-3.07156	-7.03886	5.00E-05	0.000851213	yes
DBC1	chr9:121928907-122131739	TTD7PVmother_uv	TTD7PV_uv	OK	3.92379	0.536652	-2.87019	-5.90432	5.00E-05	0.000851213	yes
DBNDD1	chr16:90071278-90085937	TTD7PVmother_uv	TTD7PV_uv	OK	0.885986	0.217358	-2.02721	-2.37895	0.00035	0.00451604	yes
DCAF4	chr14:73393039-73426357	TTD7PVmother_uv	TTD7PV_uv	OK	11.0234	4.37678	-1.33263	-3.58694	5.00E-05	0.000851213	yes
DDIT4L	chr4:101107026-101111655	TTD7PVmother_uv	TTD7PV_uv	OK	3.33838	1.24005	-1.42874	-3.47854	5.00E-05	0.000851213	yes
DENND3	chr8:142138719-142205900	TTD7PVmother_uv	TTD7PV_uv	OK	3.20239	0.789983	-2.01926	-4.7263	5.00E-05	0.000851213	yes
DGAT2	chr11:75479777-75512581	TTD7PVmother_uv	TTD7PV_uv	OK	1.28687	0.572022	-1.16973	-1.90863	0.00145	0.0144679	yes
DISC1	chr1:231664398-232177019	TTD7PVmother_uv	TTD7PV_uv	OK	0.48342	0.118353	-2.03018	-0.891516	0.00015	0.00220839	yes
DISP2	chr15:40650433-40663256	TTD7PVmother_uv	TTD7PV_uv	OK	2.89569	1.16145	-1.31798	-3.31788	5.00E-05	0.000851213	yes
DLX1	chr2:172950207-172954401	TTD7PVmother_uv	TTD7PV_uv	OK	2.618	0.565509	-2.21084	-3.93036	5.00E-05	0.000851213	yes
DLX2	chr2:172964165-172967478	TTD7PVmother_uv	TTD7PV_uv	OK	29.3039	13.38	-1.13102	-4.19179	5.00E-05	0.000851213	yes
DLX3	chr17:48067368-48072588	TTD7PVmother_uv	TTD7PV_uv	OK	1.81943	0.840615	-1.11397	-2.2338	0.0009	0.0098346	yes
DNAJC12	chr10:69556426-69597937	TTD7PVmother_uv	TTD7PV_uv	OK	0.357236	1.10822	1.6333	1.73644	0.0041	0.0331146	yes
DOCK4	chr7:111366163-111846462	TTD7PVmother_uv	TTD7PV_uv	OK	0.834614	0.202239	-2.04505	-3.96038	5.00E-05	0.000851213	yes
DPP4	chr2:162848754-162931052	TTD7PVmother_uv	TTD7PV_uv	OK	155.569	20.9893	-2.88983	-8.37999	5.00E-05	0.000851213	yes
DPYSL4	chr10:134000413-134019280	TTD7PVmother_uv	TTD7PV_uv	OK	1.11377	3.30189	1.56784	3.51606	5.00E-05	0.000851213	yes
DSG2	chr18:29078026-29136874	TTD7PVmother_uv	TTD7PV_uv	OK	0.586341	0.122895	-2.25431	-3.17428	5.00E-05	0.000851213	yes
DSP	chr6:7541869-7586946	TTD7PVmother_uv	TTD7PV_uv	OK	28.067	8.63457	-1.70068	-4.83162	5.00E-05	0.000851213	yes
DUSP1	chr5:172195092-172198203	TTD7PVmother_uv	TTD7PV_uv	OK	299.98	137.07	-1.12995	-3.66357	5.00E-05	0.000851213	yes
DUSP10	chr1:221874763-221915516	TTD7PVmother_uv	TTD7PV_uv	OK	3.15228	1.07639	-1.55019	-3.1148	5.00E-05	0.000851213	yes
DUSP4	chr8:29190578-29208267	TTD7PVmother_uv	TTD7PV_uv	OK	4.23593	0.265627	-3.99521	-7.99456	5.00E-05	0.000851213	yes
DYNC1I1	chr7:95401817-95727736	TTD7PVmother_uv	TTD7PV_uv	OK	0.905777	0.0898745	-3.33317	-3.43017	5.00E-05	0.000851213	yes
DYSF	chr2:71680752-71913893	TTD7PVmother_uv	TTD7PV_uv	OK	0.502805	0.107157	-2.23027	-2.69658	5.00E-05	0.000851213	yes
EBF3	chr10:131633495-131762091	TTD7PVmother_uv	TTD7PV_uv	OK	3.5183	1.01832	-1.78869	-4.23925	5.00E-05	0.000851213	yes
EDIL3	chr5:83238125-83680611	TTD7PVmother_uv	TTD7PV_uv	OK	37.6773	6.87158	-2.45498	-6.22459	5.00E-05	0.000851213	yes
EDN1	chr6:12290528-12297427	TTD7PVmother_uv	TTD7PV_uv	OK	4.75227	2.32344	-1.03235	-2.25732	0.00015	0.00220839	yes
EEPD1	chr7:36192835-36341152	TTD7PVmother_uv	TTD7PV_uv	OK	2.24412	0.750537	-1.58015	-3.50226	5.00E-05	0.000851213	yes
EFCAB4B	chr12:3724493-3862366	TTD7PVmother_uv	TTD7PV_uv	OK	1.24894	0.201883	-2.62912	-3.08505	5.00E-05	0.000851213	yes
EGR4	chr2:73518056-73520829	TTD7PVmother_uv	TTD7PV_uv	OK	4.53891	2.16875	-1.06548	-2.85089	0.0001	0.00155758	yes
EIF4EBP1	chr8:37888019-37917883	TTD7PVmother_uv	TTD7PV_uv	OK	61.1918	128.331	1.06846	4.7423	5.00E-05	0.000851213	yes
ELFN2	chr22:37763999-37823505	TTD7PVmother_uv	TTD7PV_uv	OK	0.223883	0.548779	1.29348	2.41677	0.00015	0.00220839	yes

Gene	Location	Sample 1	Sample 2	Status	Value 1	Value 2	Log FC	Stat	p-value	q-value	Sig
ELN	chr7:73442426-73484236	TTD7PVmother_uv	TTD7PV_uv	OK	361.179	903.054	1.48403	2.40938	5.00E-05	0.000851213	yes
ELOVL2	chr6:10980992-11079377	TTD7PVmother_uv	TTD7PV_uv	OK	0.310434	0.663888	1.09665	1.93061	0.00285	0.0248971	yes
ENPP5	chr6:46127761-46138717	TTD7PVmother_uv	TTD7PV_uv	OK	2.87854	1.11048	-1.37416	-3.03427	5.00E-05	0.000851213	yes
EPDR1	chr7:37960162-37991542	TTD7PVmother_uv	TTD7PV_uv	OK	21.3604	1.45972	-3.87117	-9.03993	5.00E-05	0.000851213	yes
EPHA3	chr3:89156673-89531284	TTD7PVmother_uv	TTD7PV_uv	OK	0.0705308	0.527846	2.90379	3.19486	5.00E-05	0.000851213	yes
ESM1	chr5:54273694-54281414	TTD7PVmother_uv	TTD7PV_uv	OK	0.927307	1.9767	1.09197	1.93243	0.00155	0.015237	yes
ESYT3	chr3:138153414-138197256	TTD7PVmother_uv	TTD7PV_uv	OK	0.705852	0.109603	-2.68708	-3.92469	5.00E-05	0.000851213	yes
ETNK2	chr1:204100189-204121307	TTD7PVmother_uv	TTD7PV_uv	OK	1.6026	0.698653	-1.19776	-2.35249	0.00035	0.00451604	yes
EXO1	chr1:242011492-242053241	TTD7PVmother_uv	TTD7PV_uv	OK	0.54519	1.40296	1.36365	2.40476	5.00E-05	0.000851213	yes
EXTL1	chr1:26348270-26362954	TTD7PVmother_uv	TTD7PV_uv	OK	0.783477	0.0995945	-2.97575	-3.8986	5.00E-05	0.000851213	yes
F10	chr13:113777112-113803843	TTD7PVmother_uv	TTD7PV_uv	OK	4.62466	1.01938	-2.18166	-4.50543	5.00E-05	0.000851213	yes
F2R	chr5:76011867-76031595	TTD7PVmother_uv	TTD7PV_uv	OK	7.57075	17.5776	1.21523	4.29811	5.00E-05	0.000851213	yes
F3	chr1:94994731-95007413	TTD7PVmother_uv	TTD7PV_uv	OK	73.7999	12.7506	-2.53305	-7.36274	5.00E-05	0.000851213	yes
F8	chrX:154064063-154250998	TTD7PVmother_uv	TTD7PV_uv	OK	3.58974	1.20696	-1.5725	-2.5071	0.0017	0.0164429	yes
FABP3	chr1:31838099-31845923	TTD7PVmother_uv	TTD7PV_uv	OK	15.6152	5.51648	-1.50113	-4.38822	5.00E-05	0.000851213	yes
FABP5	chr8:82192717-82197012	TTD7PVmother_uv	TTD7PV_uv	OK	4.7277	16.9883	1.84533	5.53852	5.00E-05	0.000851213	yes
FAM118A	chr22:45705080-45737836	TTD7PVmother_uv	TTD7PV_uv	OK	2.96788	6.60695	1.15455	2.92201	5.00E-05	0.000851213	yes
FAM134B	chr5:16473146-16617167	TTD7PVmother_uv	TTD7PV_uv	OK	2.0514	0.242336	-3.08153	-5.02597	5.00E-05	0.000851213	yes
FAM155A	chr13:107820878-108519460	TTD7PVmother_uv	TTD7PV_uv	OK	2.66284	0.715851	-1.89524	-4.27	5.00E-05	0.000851213	yes
FAM171A2	chr17:42431100-42441235	TTD7PVmother_uv	TTD7PV_uv	OK	4.47822	1.98455	-1.17411	-3.08802	5.00E-05	0.000851213	yes
FAM21C	chr10:46222647-46288412	TTD7PVmother_uv	TTD7PV_uv	OK	8.3612	3.78776	-1.14236	-3.18864	5.00E-05	0.000851213	yes
FAM43A	chr3:194406621-194409766	TTD7PVmother_uv	TTD7PV_uv	OK	45.6099	20.2561	-1.17099	-4.36266	5.00E-05	0.000851213	yes
FAM43B	chr1:20878931-20881513	TTD7PVmother_uv	TTD7PV_uv	OK	0.77044	0.0960717	-3.0035	-3.80577	0.0001	0.00155758	yes
FAM65C	chr20:49202646-49253426	TTD7PVmother_uv	TTD7PV_uv	OK	0.878175	0.326041	-1.42945	-2.42401	0.00015	0.00220839	yes
FAM83H	chr8:144806102-144815914	TTD7PVmother_uv	TTD7PV_uv	OK	4.52967	1.99977	-1.17957	-3.30103	5.00E-05	0.000851213	yes
FAM89A	chr1:231154703-231175995	TTD7PVmother_uv	TTD7PV_uv	OK	3.82567	1.63494	-1.22647	-2.38045	0.0003	0.00396402	yes
FBN2	chr5:127593600-127873735	TTD7PVmother_uv	TTD7PV_uv	OK	4.48316	33.5592	2.90412	8.3824	5.00E-05	0.000851213	yes
FBXL2	chr3:33318933-33428757	TTD7PVmother_uv	TTD7PV_uv	OK	1.22338	0.251566	-2.28187	-3.5305	5.00E-05	0.000851213	yes
FBXO32	chr8:124510126-124553493	TTD7PVmother_uv	TTD7PV_uv	OK	5.04107	1.11133	-2.18144	-5.70106	5.00E-05	0.000851213	yes
FBXO41	chr2:73481809-73496758	TTD7PVmother_uv	TTD7PV_uv	OK	0.819619	0.185183	-2.146	-3.93932	5.00E-05	0.000851213	yes
FGD4	chr12:32655040-32798984	TTD7PVmother_uv	TTD7PV_uv	OK	0.519617	0.217657	-1.25539	-2.43457	0.0003	0.00396402	yes
FGF1	chr5:141971742-142077635	TTD7PVmother_uv	TTD7PV_uv	OK	4.15068	1.73872	-1.25532	-3.01253	5.00E-05	0.000851213	yes
FGF18	chr5:170846666-170884630	TTD7PVmother_uv	TTD7PV_uv	OK	0.3578	0.919458	1.36163	2.19361	0.002	0.0187558	yes
FGF7	chr15:49447975-49913118	TTD7PVmother_uv	TTD7PV_uv	OK	70.8275	31.4761	-1.17005	-3.60093	5.00E-05	0.000851213	yes
FGFR3	chr4:1795038-1810599	TTD7PVmother_uv	TTD7PV_uv	OK	0.556168	1.23435	1.15016	2.18517	0.00065	0.00748478	yes
FGL2	chr7:76751933-76924521	TTD7PVmother_uv	TTD7PV_uv	OK	2.93327	10.4911	1.83859	4.94408	5.00E-05	0.000851213	yes
FIBCD1	chr9:133777824-133814455	TTD7PVmother_uv	TTD7PV_uv	OK	1.59176	0.499534	-1.67197	-2.96406	5.00E-05	0.000851213	yes

FKBP1B	chr2:24272583-24286550	TTD7PVmother_uv	TTD7PV_uv	OK	4.08427	1.85044	-1.14221	-1.85794	0.0023	0.0211453	yes
FKBP9L	chr7:55748766-55772260	TTD7PVmother_uv	TTD7PV_uv	OK	7.9708	3.07857	-1.37247	-3.4214	5.00E-05	0.000851213	yes
FLG	chr1:152274650-152297679	TTD7PVmother_uv	TTD7PV_uv	OK	0.706129	0.101296	-2.80135	-4.22871	5.00E-05	0.000851213	yes
FLJ34208	chr3:194207868-194209274	TTD7PVmother_uv	TTD7PV_uv	OK	3.88307	1.11264	-1.80322	-3.87153	5.00E-05	0.000851213	yes
FMNL1	chr17:43299291-43324683	TTD7PVmother_uv	TTD7PV_uv	OK	1.21687	0.531924	-1.19389	-2.33658	0.0003	0.00396402	yes
FNDC1	chr6:159590428-159693140	TTD7PVmother_uv	TTD7PV_uv	OK	19.2127	8.5533	-1.16751	-3.08369	5.00E-05	0.000851213	yes
FNDC4	chr2:27714749-27718126	TTD7PVmother_uv	TTD7PV_uv	OK	15.6906	7.55013	-1.05533	-3.35857	5.00E-05	0.000851213	yes
FNIP2	chr4:159690181-159956333	TTD7PVmother_uv	TTD7PV_uv	OK	4.38956	1.83131	-1.2612	-3.41107	5.00E-05	0.000851213	yes
FOLR3	chr11:71846770-71850934	TTD7PVmother_uv	TTD7PV_uv	OK	10.1881	3.4446	-1.56448	-4.14981	0.0001	0.00155758	yes
FOXL2	chr3:138663065-138665982	TTD7PVmother_uv	TTD7PV_uv	OK	1.6897	0.304775	-2.47095	-4.59987	5.00E-05	0.000851213	yes
FOXO1	chr13:41129800-41240734	TTD7PVmother_uv	TTD7PV_uv	OK	1.44821	0.567362	-1.35193	-3.15	5.00E-05	0.000851213	yes
FOXO3	chr6:108881025-109005971	TTD7PVmother_uv	TTD7PV_uv	OK	10.1174	4.28471	-1.23957	-4.01143	5.00E-05	0.000851213	yes
FRG1B	chr20:29611878-29634007	TTD7PVmother_uv	TTD7PV_uv	OK	3.29951	9.00716	1.44882	3.75111	5.00E-05	0.000851213	yes
FRY	chr13:32605436-32870776	TTD7PVmother_uv	TTD7PV_uv	OK	0.906243	0.372728	-1.28177	-2.87727	5.00E-05	0.000851213	yes
FSCN2	chr17:79495416-79504156	TTD7PVmother_uv	TTD7PV_uv	OK	0.807629	0.230533	-1.80872	-2.19901	0.0011	0.0115122	yes
GABBR2	chr9:101050363-101471479	TTD7PVmother_uv	TTD7PV_uv	OK	2.05841	0.61592	-1.74071	-3.83225	5.00E-05	0.000851213	yes
GAD1	chr2:171673199-171717659	TTD7PVmother_uv	TTD7PV_uv	OK	0.682937	0.141455	-2.27141	-2.02113	0.00115	0.0119464	yes
GADD45A	chr1:68150859-68154021	TTD7PVmother_uv	TTD7PV_uv	OK	315.083	151.731	-1.05421	-3.0445	5.00E-05	0.000851213	yes
GADD45B	chr19:2476122-2478257	TTD7PVmother_uv	TTD7PV_uv	OK	330.946	141.179	-1.22907	-4.3376	5.00E-05	0.000851213	yes
GALNT14	chr2:31133330-31361592	TTD7PVmother_uv	TTD7PV_uv	OK	0.316517	2.67425	3.07878	4.59755	5.00E-05	0.000851213	yes
GALNT15	chr3:16216183-16271253	TTD7PVmother_uv	TTD7PV_uv	OK	13.0751	4.44932	-1.55516	-4.93912	5.00E-05	0.000851213	yes
GALNT5	chr2:158114339-158167913	TTD7PVmother_uv	TTD7PV_uv	OK	28.9241	74.8109	1.37098	3.94572	5.00E-05	0.000851213	yes
GALNT6	chr12:51745832-51909547	TTD7PVmother_uv	TTD7PV_uv	OK	3.16882	1.30974	-1.27467	-2.24274	0.0008	0.00892721	yes
GAS1	chr9:89559276-89562104	TTD7PVmother_uv	TTD7PV_uv	OK	29.1588	12.5159	-1.22016	-4.77474	5.00E-05	0.000851213	yes
GAS5	chr1:173832385-173837125	TTD7PVmother_uv	TTD7PV_uv	OK	152.77	321.699	1.07435	3.35364	5.00E-05	0.000851213	yes
GAS6	chr13:114518582-114567046	TTD7PVmother_uv	TTD7PV_uv	OK	796.842	266.734	-1.57889	-3.44568	5.00E-05	0.000851213	yes
GCNT4	chr5:74323288-74326724	TTD7PVmother_uv	TTD7PV_uv	OK	0.701886	0.241203	-1.54099	-2.6322	0.0005	0.00606142	yes
GDF15	chr19:18496967-18499986	TTD7PVmother_uv	TTD7PV_uv	OK	108.364	33.876	-1.67755	-5.41942	5.00E-05	0.000851213	yes
GDF5	chr20:34021148-34026027	TTD7PVmother_uv	TTD7PV_uv	OK	8.85856	2.96091	-1.58103	-4.11364	5.00E-05	0.000851213	yes
GDF6	chr8:97154557-97173020	TTD7PVmother_uv	TTD7PV_uv	OK	6.37089	1.85578	-1.77947	-4.83551	5.00E-05	0.000851213	yes
GFRA1	chr10:117816441-118033126	TTD7PVmother_uv	TTD7PV_uv	OK	2.18287	5.7712	1.40265	4.18421	5.00E-05	0.000851213	yes
GGT5	chr22:24615621-24641110	TTD7PVmother_uv	TTD7PV_uv	OK	0.942453	0.109693	-3.10295	-3.35284	5.00E-05	0.000851213	yes
GJA3	chr13:20712394-20735183	TTD7PVmother_uv	TTD7PV_uv	OK	1.07755	0.253983	-2.08496	-4.0261	5.00E-05	0.000851213	yes
GLIS1	chr1:53971905-54199877	TTD7PVmother_uv	TTD7PV_uv	OK	0.823476	0.389402	-1.08047	-1.91403	0.00465	0.0367347	yes
GLRX	chr5:95149552-95158577	TTD7PVmother_uv	TTD7PV_uv	OK	56.8185	28.3715	-1.00192	-2.98728	5.00E-05	0.000851213	yes
GNAZ	chr22:23401592-23484241	TTD7PVmother_uv	TTD7PV_uv	OK	0.825883	0.0868321	-3.24964	-3.64183	5.00E-05	0.000851213	yes
GNG11	chr7:93551015-93555826	TTD7PVmother_uv	TTD7PV_uv	OK	80.3287	33.8049	-1.24868	-5.21009	5.00E-05	0.000851213	yes

GPC3	chrX:132669775-133119673	TTD7PVmother_uv	TTD7PV_uv	OK	0.1378	0.681594	2.30634	2.40561	5.00E-05	0.000851213	yes
GPR155	chr2:175296299-175351816	TTD7PVmother_uv	TTD7PV_uv	OK	0.902143	0.431574	-1.06375	-2.22675	0.00035	0.00451604	yes
GPR68	chr14:91698875-91720224	TTD7PVmother_uv	TTD7PV_uv	OK	18.9166	5.46127	-1.79235	-4.92794	5.00E-05	0.000851213	yes
GPRC5C	chr17:72427666-72443568	TTD7PVmother_uv	TTD7PV_uv	OK	0.530472	0.139265	-1.92945	-2.00531	0.00345	0.0290342	yes
GPX3	chr5:150399998-150408554	TTD7PVmother_uv	TTD7PV_uv	OK	19.0912	0.998739	-4.25665	-9.38361	5.00E-05	0.000851213	yes
GRID1	chr10:87337487-88126250	TTD7PVmother_uv	TTD7PV_uv	OK	0.690907	0.0941022	-2.87619	-4.00979	5.00E-05	0.000851213	yes
GRIK2	chr6:101846860-102517958	TTD7PVmother_uv	TTD7PV_uv	OK	3.30934	0.128609	-4.68548	-7.77071	5.00E-05	0.000851213	yes
GRIN3A	chr9:104331633-104500862	TTD7PVmother_uv	TTD7PV_uv	OK	0.125018	1.20013	3.26298	5.75303	5.00E-05	0.000851213	yes
GSTM5	chr1:110254863-110260890	TTD7PVmother_uv	TTD7PV_uv	OK	0.522966	2.9751	2.50815	4.58856	5.00E-05	0.000851213	yes
GYPC	chr2:127413510-127454251	TTD7PVmother_uv	TTD7PV_uv	OK	40.1332	17.0907	-1.23158	-3.54874	5.00E-05	0.000851213	yes
H19	chr11:2016405-2019065	TTD7PVmother_uv	TTD7PV_uv	OK	0.983669	8.77793	3.15764	5.76574	5.00E-05	0.000851213	yes
HAND2	chr4:174447651-174451378	TTD7PVmother_uv	TTD7PV_uv	OK	10.8015	1.40063	-2.94709	-7.51888	5.00E-05	0.000851213	yes
HAPLN1	chr5:82934016-83016896	TTD7PVmother_uv	TTD7PV_uv	OK	19.8811	1.21602	-4.03116	-8.36971	5.00E-05	0.000851213	yes
HAPLN3	chr15:89420518-89438770	TTD7PVmother_uv	TTD7PV_uv	OK	15.9776	4.60257	-1.79554	-5.62081	5.00E-05	0.000851213	yes
HAS1	chr19:52216364-52227221	TTD7PVmother_uv	TTD7PV_uv	OK	6.2763	0.362512	-4.11381	-7.90081	5.00E-05	0.000851213	yes
HGF	chr7:81331443-81399452	TTD7PVmother_uv	TTD7PV_uv	OK	0.268743	1.04794	1.96325	2.48318	0.0001	0.00155758	yes
HIST1H1C	chr6:26055967-26056699	TTD7PVmother_uv	TTD7PV_uv	OK	49.929	16.2815	-1.61664	-6.56062	5.00E-05	0.000851213	yes
HIST1H2BC	chr6:26123694-26124132	TTD7PVmother_uv	TTD7PV_uv	OK	7.43871	2.72996	-1.44617	-4.83652	0.0034	0.0287283	yes
HIST1H4H	chr6:26285353-26285727	TTD7PVmother_uv	TTD7PV_uv	OK	11.1581	4.02196	-1.47211	-6.43154	0.0047	0.037014	yes
HIST2H2BE	chr1:149856009-149858232	TTD7PVmother_uv	TTD7PV_uv	OK	24.2636	11.4733	-1.08052	-4.12501	5.00E-05	0.000851213	yes
HK2	chr2:75059781-75120481	TTD7PVmother_uv	TTD7PV_uv	OK	7.92443	2.55738	-1.63164	-5.09907	5.00E-05	0.000851213	yes
HMGA2	chr12:66151799-66360071	TTD7PVmother_uv	TTD7PV_uv	OK	3.25366	1.41614	-1.2001	-1.90695	0.0039	0.0319486	yes
HMOX1	chr22:35777059-35790207	TTD7PVmother_uv	TTD7PV_uv	OK	199.108	88.0884	-1.17653	-4.06793	5.00E-05	0.000851213	yes
HNRNPA1	chr12:54674487-54679030	TTD7PVmother_uv	TTD7PV_uv	OK	208.649	447.447	1.10064	2.41859	5.00E-05	0.000851213	yes
HOXA1	chr7:27132613-27135625	TTD7PVmother_uv	TTD7PV_uv	OK	1.40629	0.560044	-1.32828	-2.2827	0.0002	0.00284504	yes
HOXB8	chr17:46689707-46692301	TTD7PVmother_uv	TTD7PV_uv	OK	5.96961	0.303813	-4.29638	-7.69216	5.00E-05	0.000851213	yes
HOXB9	chr17:46698518-46703835	TTD7PVmother_uv	TTD7PV_uv	OK	2.79624	0.193768	-3.85109	-6.33522	5.00E-05	0.000851213	yes
HOXC10	chr12:54378945-54384062	TTD7PVmother_uv	TTD7PV_uv	OK	25.0667	0.062826	-8.64019	-7.98179	0.00265	0.0234417	yes
HOXC9	chr12:54393876-54397120	TTD7PVmother_uv	TTD7PV_uv	OK	18.1309	4.94524	-1.87434	-5.82775	5.00E-05	0.000851213	yes
HS3ST2	chr16:22825859-22927659	TTD7PVmother_uv	TTD7PV_uv	OK	0.710916	0.0980804	-2.85764	-3.08376	0.0016	0.0156192	yes
HS3ST3A1	chr17:13399005-13505244	TTD7PVmother_uv	TTD7PV_uv	OK	8.80994	3.46703	-1.34543	-4.01805	5.00E-05	0.000851213	yes
HSD11B1	chr1:209859524-209908295	TTD7PVmother_uv	TTD7PV_uv	OK	1.26066	0.347857	-1.85761	-2.25905	0.0004	0.00504775	yes
HSD3B7	chr16:30996518-31000473	TTD7PVmother_uv	TTD7PV_uv	OK	36.5959	16.4404	-1.15443	-3.50449	5.00E-05	0.000851213	yes
HSPA2	chr14:65007185-65009954	TTD7PVmother_uv	TTD7PV_uv	OK	21.3862	7.78784	-1.45739	-4.65795	5.00E-05	0.000851213	yes
HSPA6	chr1:161494035-161496687	TTD7PVmother_uv	TTD7PV_uv	OK	2.54867	0.198041	-3.68587	-5.71614	5.00E-05	0.000851213	yes
HSPB3	chr5:53751430-53752214	TTD7PVmother_uv	TTD7PV_uv	OK	3.83136	1.66153	-1.20534	-2.77645	0.0026	0.0231127	yes
HSPB7	chr1:16340522-16345285	TTD7PVmother_uv	TTD7PV_uv	OK	320.336	132.04	-1.27861	-3.51977	5.00E-05	0.000851213	yes

HSPB8	chr12:119616594-119632551	TTD7PVmother_uv	TTD7PV_uv	OK	24.728	9.63685	-1.35951	-4.70308	5.00E-05	0.000851213	yes
HTR2A	chr13:47405676-47471211	TTD7PVmother_uv	TTD7PV_uv	OK	0.594662	0.120219	-2.30641	-3.41002	0.0001	0.00155758	yes
HTRA3	chr4:8271488-8308838	TTD7PVmother_uv	TTD7PV_uv	OK	23.6443	62.9367	1.41241	4.81603	5.00E-05	0.000851213	yes
ICAM1	chr19:10381516-10397291	TTD7PVmother_uv	TTD7PV_uv	OK	6.70212	1.82033	-1.88042	-4.9088	5.00E-05	0.000851213	yes
ICAM5	chr19:10400654-10407454	TTD7PVmother_uv	TTD7PV_uv	OK	1.29031	0.271506	-2.24866	-3.76918	5.00E-05	0.000851213	yes
IDO1	chr8:39771327-39786309	TTD7PVmother_uv	TTD7PV_uv	OK	0.830596	1.66144	1.00022	1.89224	0.00505	0.0390401	yes
IER3	chr6_ssto_hap7:2043292-2044644	TTD7PVmother_uv	TTD7PV_uv	OK	945.916	336.744	-1.49006	-4.63658	5.00E-05	0.000851213	yes
IFFO2	chr1:19230773-19282826	TTD7PVmother_uv	TTD7PV_uv	OK	1.64144	0.688058	-1.25436	-2.8723	5.00E-05	0.000851213	yes
IFI44	chr1:79115476-79129763	TTD7PVmother_uv	TTD7PV_uv	OK	1.70821	3.84761	1.17148	2.6983	0.00025	0.00340302	yes
IFIT1	chr10:91152302-91166244	TTD7PVmother_uv	TTD7PV_uv	OK	4.58418	1.68563	-1.44338	-3.53508	5.00E-05	0.000851213	yes
IFIT2	chr10:91061705-91069033	TTD7PVmother_uv	TTD7PV_uv	OK	2.30611	0.911571	-1.33904	-2.91349	5.00E-05	0.000851213	yes
IGDCC4	chr15:65673824-65715410	TTD7PVmother_uv	TTD7PV_uv	OK	0.425185	2.83894	2.73919	6.1165	5.00E-05	0.000851213	yes
IGF2BP1	chr17:47074773-47133507	TTD7PVmother_uv	TTD7PV_uv	OK	0.277209	0.616349	1.15277	2.17209	0.00045	0.00555117	yes
IGFBP2	chr2:217498126-217529158	TTD7PVmother_uv	TTD7PV_uv	OK	1.02049	5.14473	2.33383	5.12028	5.00E-05	0.000851213	yes
IGFBP4	chr17:38599675-38613982	TTD7PVmother_uv	TTD7PV_uv	OK	804.823	397.368	-1.0182	-2.57367	0.0001	0.00155758	yes
IGFBP5	chr2:217536827-217560272	TTD7PVmother_uv	TTD7PV_uv	OK	8.92469	3.53128	-1.33761	-3.96368	5.00E-05	0.000851213	yes
IGSF10	chr3:150804675-151176497	TTD7PVmother_uv	TTD7PV_uv	OK	1.11243	4.65446	2.0649	3.9185	5.00E-05	0.000851213	yes
IL12A	chr3:159706622-159713806	TTD7PVmother_uv	TTD7PV_uv	OK	2.18918	0.845797	-1.372	-2.62568	0.0004	0.00504775	yes
IL13RA2	chrX:114238537-114252207	TTD7PVmother_uv	TTD7PV_uv	OK	53.8096	9.4513	-2.50928	-8.435	5.00E-05	0.000851213	yes
IL18R1	chr2:102979096-103015217	TTD7PVmother_uv	TTD7PV_uv	OK	0.441989	2.49961	2.49962	4.89116	5.00E-05	0.000851213	yes
IL1RL1	chr2:102927961-102968497	TTD7PVmother_uv	TTD7PV_uv	OK	3.47879	20.6244	2.5677	6.47526	5.00E-05	0.000851213	yes
IL1RN	chr2:113875469-113891593	TTD7PVmother_uv	TTD7PV_uv	OK	0.797688	0.138973	-2.52102	-2.30566	0.00025	0.00340302	yes
IL20RB	chr3:136676706-136729926	TTD7PVmother_uv	TTD7PV_uv	OK	20.5988	5.76605	-1.83691	-5.75456	5.00E-05	0.000851213	yes
IL33	chr9:6215785-6257983	TTD7PVmother_uv	TTD7PV_uv	OK	11.0432	3.09001	-1.83747	-4.69322	5.00E-05	0.000851213	yes
IL6	chr7:22766765-22771621	TTD7PVmother_uv	TTD7PV_uv	OK	23.8064	8.03884	-1.56629	-5.01998	5.00E-05	0.000851213	yes
INA	chr10:105036919-105050108	TTD7PVmother_uv	TTD7PV_uv	OK	0.739467	0.130815	-2.49896	-3.57601	5.00E-05	0.000851213	yes
INMT	chr7:30791750-30932002	TTD7PVmother_uv	TTD7PV_uv	OK	1.69641	0.423167	-2.00319	-2.31808	0.0022	0.0203891	yes
IQCA1	chr2:237232789-237416178	TTD7PVmother_uv	TTD7PV_uv	OK	0.507587	0.158962	-1.67497	-2.09226	0.0001	0.00155758	yes
IRAK2	chr3:10206562-10285427	TTD7PVmother_uv	TTD7PV_uv	OK	0.699621	0.285382	-1.29368	-2.14759	0.00145	0.0144679	yes
IRS2	chr13:110406183-110438914	TTD7PVmother_uv	TTD7PV_uv	OK	19.467	6.26305	-1.63609	-5.9734	5.00E-05	0.000851213	yes
ISG15	chr1:948846-949919	TTD7PVmother_uv	TTD7PV_uv	OK	13.1151	31.5725	1.26744	5.0124	5.00E-05	0.000851213	yes
ISLR2	chr15:74421714-74429143	TTD7PVmother_uv	TTD7PV_uv	OK	0.675362	0.118886	-2.50609	-3.55255	5.00E-05	0.000851213	yes
ISM1	chr20:13202417-13281297	TTD7PVmother_uv	TTD7PV_uv	OK	4.19701	1.8933	-1.14846	-2.45858	5.00E-05	0.000851213	yes
ITGA3	chr17:48133339-48167849	TTD7PVmother_uv	TTD7PV_uv	OK	11.0905	4.9182	-1.17313	-3.37901	5.00E-05	0.000851213	yes
ITGA7	chr12:56075329-56106089	TTD7PVmother_uv	TTD7PV_uv	OK	8.72531	2.1505	-2.02053	-5.00604	5.00E-05	0.000851213	yes
ITGB3	chr17:45331207-45390077	TTD7PVmother_uv	TTD7PV_uv	OK	17.1646	4.30247	-1.9962	-6.05599	5.00E-05	0.000851213	yes
ITGB8	chr7:20370724-20455382	TTD7PVmother_uv	TTD7PV_uv	OK	1.97804	0.556802	-1.82883	-4.82109	5.00E-05	0.000851213	yes

Gene	Location										
ITIH5	chr10:7601231-7708961	TTD7PVmother_uv	TTD7PV_uv	OK	0.929046	4.96396	2.41767	5.01428	5.00E-05	0.000851213	yes
ITPR3	chr6:33589155-33664348	TTD7PVmother_uv	TTD7PV_uv	OK	27.8691	11.0117	-1.33963	-3.95543	5.00E-05	0.000851213	yes
JAM2	chr21:27011593-27089874	TTD7PVmother_uv	TTD7PV_uv	OK	4.45057	1.24528	-1.83752	-3.46627	5.00E-05	0.000851213	yes
JPH2	chr20:42740336-42816218	TTD7PVmother_uv	TTD7PV_uv	OK	2.93313	0.39925	-2.87708	-5.00834	5.00E-05	0.000851213	yes
JUN	chr1:59246462-59249785	TTD7PVmother_uv	TTD7PV_uv	OK	211.591	91.4598	-1.21007	-3.7711	5.00E-05	0.000851213	yes
JUP	chr17:39910858-39942964	TTD7PVmother_uv	TTD7PV_uv	OK	3.79378	1.20016	-1.66041	-3.64788	5.00E-05	0.000851213	yes
KALRN	chr3:123813557-124440036	TTD7PVmother_uv	TTD7PV_uv	OK	1.03748	0.2967	-1.80601	-2.52224	0.00015	0.00220839	yes
KAZALD1	chr10:102820998-102825351	TTD7PVmother_uv	TTD7PV_uv	OK	8.55423	22.0739	1.36763	4.64235	5.00E-05	0.000851213	yes
KBTBD11	chr8:1922043-1955109	TTD7PVmother_uv	TTD7PV_uv	OK	0.600464	1.76283	1.55374	3.88675	5.00E-05	0.000851213	yes
KBTBD8	chr3:67048726-67061632	TTD7PVmother_uv	TTD7PV_uv	OK	0.287369	0.674126	1.23011	2.259	0.00085	0.00936112	yes
KCNE4	chr2:223916647-223920357	TTD7PVmother_uv	TTD7PV_uv	OK	15.2708	7.43111	-1.03913	-3.36217	5.00E-05	0.000851213	yes
KCNF1	chr2:11052062-11054351	TTD7PVmother_uv	TTD7PV_uv	OK	0.717098	0.122483	-2.54959	-3.31379	0.0001	0.00155758	yes
KCNJ15	chr21:39601836-39673746	TTD7PVmother_uv	TTD7PV_uv	OK	3.16806	1.0976	-1.52925	-3.09206	5.00E-05	0.000851213	yes
KCNJ2	chr17:68165675-68176183	TTD7PVmother_uv	TTD7PV_uv	OK	0.605554	0.231102	-1.38972	-2.3822	0.0005	0.00606142	yes
KCNJ2-AS1	chr17:68163101-68165543	TTD7PVmother_uv	TTD7PV_uv	OK	0.568053	0.214476	-1.4052	-2.06758	0.00435	0.034778	yes
KCNJ8	chr12:21917888-21927755	TTD7PVmother_uv	TTD7PV_uv	OK	7.20699	2.19207	-1.7171	-4.54561	5.00E-05	0.000851213	yes
KCNK1	chr1:233749749-233808258	TTD7PVmother_uv	TTD7PV_uv	OK	8.29879	2.36619	-1.81034	-4.36831	5.00E-05	0.000851213	yes
KCNK6	chr19:38810483-38819649	TTD7PVmother_uv	TTD7PV_uv	OK	5.2153	2.21244	-1.23711	-3.27747	5.00E-05	0.000851213	yes
KCNMB4	chr12:70760061-70828072	TTD7PVmother_uv	TTD7PV_uv	OK	0.825654	0.188671	-2.12966	-3.74574	5.00E-05	0.000851213	yes
KCNQ3	chr8:133133104-133493004	TTD7PVmother_uv	TTD7PV_uv	OK	0.517455	0.196416	-1.39752	-2.69446	5.00E-05	0.000851213	yes
KCNS2	chr8:99439249-99443023	TTD7PVmother_uv	TTD7PV_uv	OK	0.630137	0.204337	-1.62471	-2.4475	0.00065	0.00748478	yes
KIAA0226L	chr13:46916136-46961635	TTD7PVmother_uv	TTD7PV_uv	OK	0.568541	0.265169	-1.10036	-1.82942	0.0051	0.0392824	yes
KIAA1161	chr9:34368906-34376894	TTD7PVmother_uv	TTD7PV_uv	OK	0.895876	0.348564	-1.36188	-2.53167	0.00035	0.00451604	yes
KIAA1211	chr4:57036360-57196890	TTD7PVmother_uv	TTD7PV_uv	OK	0.166115	1.67253	3.33178	6.11323	5.00E-05	0.000851213	yes
KIF26B	chr1:245318286-245866428	TTD7PVmother_uv	TTD7PV_uv	OK	1.92016	0.78302	-1.2941	-3.10534	5.00E-05	0.000851213	yes
KIFC2	chr8:145691737-145701718	TTD7PVmother_uv	TTD7PV_uv	OK	7.13536	2.82997	-1.3342	-3.79069	5.00E-05	0.000851213	yes
KLF5	chr13:73633141-73651676	TTD7PVmother_uv	TTD7PV_uv	OK	0.633696	0.272596	-1.21702	-2.07259	0.0024	0.0217169	yes
KLHDC7B	chr22:50986461-50989452	TTD7PVmother_uv	TTD7PV_uv	OK	0.432233	1.59879	1.8871	3.45658	0.00015	0.00220839	yes
KRT14	chr17:39738530-39743147	TTD7PVmother_uv	TTD7PV_uv	OK	3.20379	0.533211	-2.587	-4.15322	5.00E-05	0.000851213	yes
KRT17	chr17:39775691-39780882	TTD7PVmother_uv	TTD7PV_uv	OK	1.06582	0.15282	-2.80206	-3.39734	0.00055	0.00656053	yes
KRT18	chr12:53290970-53346685	TTD7PVmother_uv	TTD7PV_uv	OK	11.2414	2.59271	-2.11628	-2.65058	5.00E-05	0.000851213	yes
KRT34	chr17:39533920-39538636	TTD7PVmother_uv	TTD7PV_uv	OK	13.4352	4.35827	-1.62419	-4.61779	5.00E-05	0.000851213	yes
KRTAP1-1	chr17:39196810-39197713	TTD7PVmother_uv	TTD7PV_uv	OK	9.74143	1.95299	-2.31845	-5.78003	5.00E-05	0.000851213	yes
KRTAP1-5	chr17:39182278-39183454	TTD7PVmother_uv	TTD7PV_uv	OK	53.1903	22.012	-1.27287	-5.07427	5.00E-05	0.000851213	yes
KRTAP3-2	chr17:39155444-39156138	TTD7PVmother_uv	TTD7PV_uv	OK	2.18689	0.138593	-3.97995	-3.57536	0.00475	0.0372915	yes
KRTAP4-12	chr17:39279344-39280419	TTD7PVmother_uv	TTD7PV_uv	OK	1.15774	0.140227	-3.04547	-3.47073	0.00565	0.042584	yes
LAMC2	chr1:183155173-183214262	TTD7PVmother_uv	TTD7PV_uv	OK	1.63336	0.630295	-1.37374	-2.81005	5.00E-05	0.000851213	yes

Gene	Location	Sample1	Sample2	Status	Val1	Val2	Val3	Val4	p	q	Sig
LAMP3	chr3:182840002-182880667	TTD7PVmother_uv	TTD7PV_uv	OK	0.132661	1.70805	3.68654	5.21251	5.00E-05	0.000851213	yes
LBH	chr2:30454396-30482899	TTD7PVmother_uv	TTD7PV_uv	OK	28.5872	8.96827	-1.67247	-5.30701	5.00E-05	0.000851213	yes
LDOC1	chrX:140269930-140271310	TTD7PVmother_uv	TTD7PV_uv	OK	25.4875	4.21489	-2.59622	-8.04782	5.00E-05	0.000851213	yes
LGALS3BP	chr17:76967334-76976061	TTD7PVmother_uv	TTD7PV_uv	OK	26.5335	5.15602	-2.36349	-7.12319	5.00E-05	0.000851213	yes
LGR4	chr11:27387507-27494334	TTD7PVmother_uv	TTD7PV_uv	OK	34.4051	72.179	1.06896	3.7109	5.00E-05	0.000851213	yes
LGR5	chr12:71833812-71978621	TTD7PVmother_uv	TTD7PV_uv	OK	0.289636	11.94	5.36542	10.3603	5.00E-05	0.000851213	yes
LIF	chr22:30636435-30642840	TTD7PVmother_uv	TTD7PV_uv	OK	64.3122	17.3596	-1.88936	-5.73217	5.00E-05	0.000851213	yes
LIMCH1	chr4:41362803-41702061	TTD7PVmother_uv	TTD7PV_uv	OK	6.66729	1.55343	-2.10165	-4.93205	5.00E-05	0.000851213	yes
LINC00116	chr2:110969105-110980517	TTD7PVmother_uv	TTD7PV_uv	OK	4.5542	9.67737	1.08742	3.10678	5.00E-05	0.000851213	yes
LINC00263	chr10:102133332-102148111	TTD7PVmother_uv	TTD7PV_uv	OK	1.17891	2.45112	1.05598	2.18491	0.0066	0.0477225	yes
LINC00341	chr14:95873603-95876427	TTD7PVmother_uv	TTD7PV_uv	OK	1.16051	2.3434	1.01384	2.1717	0.00075	0.00843633	yes
LINC00472	chr6:72124148-72130448	TTD7PVmother_uv	TTD7PV_uv	OK	1.55647	0.684655	-1.18483	-2.46545	0.00115	0.0119464	yes
LINC00478	chr21:17442841-17982094	TTD7PVmother_uv	TTD7PV_uv	OK	0.287394	0.881693	1.61724	2.65628	5.00E-05	0.000851213	yes
LINC00565	chr13:114629486-114631964	TTD7PVmother_uv	TTD7PV_uv	OK	3.13647	1.40071	-1.16298	-2.65608	0.0002	0.00284504	yes
LINC00578	chr3:177159708-177470492	TTD7PVmother_uv	TTD7PV_uv	OK	0.889665	0.155672	-2.51476	-2.85238	0.0033	0.0280145	yes
LINC00607	chr2:216476285-216708259	TTD7PVmother_uv	TTD7PV_uv	OK	0.92984	0.337156	-1.46357	-2.59101	0.00025	0.00340302	yes
LINC00649	chr21:35303515-35343487	TTD7PVmother_uv	TTD7PV_uv	OK	0.0698526	0.571211	3.03164	3.42694	0.0005	0.00606142	yes
LINC00842	chr10:47096453-47151400	TTD7PVmother_uv	TTD7PV_uv	OK	1.8154	0.569651	-1.67214	-2.98169	5.00E-05	0.000851213	yes
LIPC	chr15:58724174-58861073	TTD7PVmother_uv	TTD7PV_uv	OK	1.31259	2.86695	1.1271	2.47792	0.00095	0.0102305	yes
LIPT1	chr2:99771417-99779613	TTD7PVmother_uv	TTD7PV_uv	OK	1.08842	2.31691	1.08997	1.80004	0.0016	0.0156192	yes
LMCD1	chr3:8543510-8609806	TTD7PVmother_uv	TTD7PV_uv	OK	56.9847	28.1881	-1.01549	-3.76888	5.00E-05	0.000851213	yes
LMO7	chr13:76194569-76434006	TTD7PVmother_uv	TTD7PV_uv	OK	83.664	40.2212	-1.05665	-2.73505	5.00E-05	0.000851213	yes
LMOD1	chr1:201865583-201915716	TTD7PVmother_uv	TTD7PV_uv	OK	5.44873	1.26208	-2.11011	-4.56087	5.00E-05	0.000851213	yes
LOC100130417	chr1:852952-854817	TTD7PVmother_uv	TTD7PV_uv	OK	2.28449	5.71418	1.32267	3.79749	0.0033	0.0280145	yes
LOC100130992	chr10:22541000-22547477	TTD7PVmother_uv	TTD7PV_uv	OK	0.520647	1.12841	1.11591	2.59213	0.0001	0.00155758	yes
LOC100505633	chr1:159931013-159948876	TTD7PVmother_uv	TTD7PV_uv	OK	15.1792	34.923	1.20208	4.08448	5.00E-05	0.000851213	yes
LOC100505695	chr2:171627603-171634757	TTD7PVmother_uv	TTD7PV_uv	OK	0.633827	2.23224	1.81633	2.2335	0.00015	0.00220839	yes
LOC100506385	chr21:36118121-36157168	TTD7PVmother_uv	TTD7PV_uv	OK	1.08583	0.367866	-1.56155	-1.92395	0.0049	0.0381138	yes
LOC255167	chr5:6582286-6588613	TTD7PVmother_uv	TTD7PV_uv	OK	0.587138	0.0398614	-3.88063	-2.7849	0.00155	0.015237	yes
LOC284023	chr17:7816639-7819265	TTD7PVmother_uv	TTD7PV_uv	OK	2.64798	0.476162	-2.47537	-5.02137	5.00E-05	0.000851213	yes
LOC284344	chr19:43715942-43752798	TTD7PVmother_uv	TTD7PV_uv	OK	0.660665	0.0984692	-2.74618	-2.8985	0.00225	0.020746	yes
LOC285084	chr2:175190754-175195370	TTD7PVmother_uv	TTD7PV_uv	OK	4.6546	0.207649	-4.48644	-8.07639	5.00E-05	0.000851213	yes
LOC339524	chr1:87595447-87634886	TTD7PVmother_uv	TTD7PV_uv	OK	0.826117	0.0592057	-3.80254	-2.65949	5.00E-05	0.000851213	yes
LOC619207	chr10:135267431-135281953	TTD7PVmother_uv	TTD7PV_uv	OK	0.620329	0.305231	-1.02313	-1.84039	0.0025	0.022429	yes
LOC654342	chr2:91824708-91847975	TTD7PVmother_uv	TTD7PV_uv	OK	11.6498	29.0267	1.31708	5.13325	5.00E-05	0.000851213	yes
LOC654433	chr2:113973573-114036498	TTD7PVmother_uv	TTD7PV_uv	OK	14.6678	0.168672	-6.44229	-9.15765	5.00E-05	0.000851213	yes
LOC730091	chr3:156465131-156534851	TTD7PVmother_uv	TTD7PV_uv	OK	1.24631	0.567955	-1.13381	-2.26549	0.0009	0.0098346	yes

Gene	Location	Sample1	Sample2	Status	Val1	Val2	Val3	Val4	p1	p2	sig
LRIG1	chr3:66119284-66550845	TTD7PVmother_uv	TTD7PV_uv	OK	6.44354	2.9106	-1.14654	-2.11147	0.0005	0.00606142	yes
LRRC15	chr3:194075975-194090472	TTD7PVmother_uv	TTD7PV_uv	OK	109.207	36.9342	-1.56404	-4.31684	5.00E-05	0.000851213	yes
LRRC17	chr7:102453307-102715288	TTD7PVmother_uv	TTD7PV_uv	OK	0.858301	2.49721	1.54076	2.67359	5.00E-05	0.000851213	yes
LRRC2	chr3:46556877-46608040	TTD7PVmother_uv	TTD7PV_uv	OK	7.45836	3.12882	-1.25324	-3.69411	5.00E-05	0.000851213	yes
LRRC32	chr11:76368567-76381791	TTD7PVmother_uv	TTD7PV_uv	OK	104.484	24.2548	-2.10694	-5.39142	5.00E-05	0.000851213	yes
LRRC8E	chr19:7953389-7966908	TTD7PVmother_uv	TTD7PV_uv	OK	2.6161	0.677529	-1.94906	-3.88046	5.00E-05	0.000851213	yes
LY6K	chr8:143781528-143808391	TTD7PVmother_uv	TTD7PV_uv	OK	5.74651	16.2956	1.50373	3.99887	5.00E-05	0.000851213	yes
LYN	chr8:56792385-56925006	TTD7PVmother_uv	TTD7PV_uv	OK	1.17937	0.327488	-1.84849	-3.32051	5.00E-05	0.000851213	yes
LYNX1	chr8:143845755-143859640	TTD7PVmother_uv	TTD7PV_uv	OK	17.3326	7.23532	-1.26036	-3.69279	5.00E-05	0.000851213	yes
LYPD3	chr19:43964945-43969831	TTD7PVmother_uv	TTD7PV_uv	OK	0.893442	0.0782109	-3.51393	-3.21015	0.00405	0.0328367	yes
MAGI1	chr3:65339905-66024509	TTD7PVmother_uv	TTD7PV_uv	OK	6.22617	2.51752	-1.30634	-3.81476	5.00E-05	0.000851213	yes
MALAT1	chr11:65265232-65273939	TTD7PVmother_uv	TTD7PV_uv	OK	97.7956	42.8717	-1.18974	-3.30011	5.00E-05	0.000851213	yes
MALL	chr2:110841446-110874143	TTD7PVmother_uv	TTD7PV_uv	OK	10.1897	25.7014	1.33474	4.29208	5.00E-05	0.000851213	yes
MAMDC2	chr9:72658496-72873790	TTD7PVmother_uv	TTD7PV_uv	OK	0.592391	0.117393	-2.33521	-2.5396	0.00465	0.0367347	yes
MAOA	chrX:43514154-43606071	TTD7PVmother_uv	TTD7PV_uv	OK	1.30659	0.0799281	-4.03096	-5.5505	5.00E-05	0.000851213	yes
MAP6	chr11:75297962-75379479	TTD7PVmother_uv	TTD7PV_uv	OK	5.23818	1.053	-2.31457	-4.73712	5.00E-05	0.000851213	yes
MBP	chr18:74690788-74844774	TTD7PVmother_uv	TTD7PV_uv	OK	2.12074	0.450993	-2.23339	-3.91492	5.00E-05	0.000851213	yes
MC4R	chr18:58038563-58040001	TTD7PVmother_uv	TTD7PV_uv	OK	0.444159	1.17403	1.40233	2.24836	0.00465	0.0367347	yes
MCOLN3	chr1:85483764-85514223	TTD7PVmother_uv	TTD7PV_uv	OK	1.42463	0.381053	-1.90252	-3.11265	5.00E-05	0.000851213	yes
MEIS3	chr19:47906374-47922785	TTD7PVmother_uv	TTD7PV_uv	OK	19.5953	7.0267	-1.47959	-4.05515	5.00E-05	0.000851213	yes
METTL24	chr6:110567148-110679475	TTD7PVmother_uv	TTD7PV_uv	OK	2.40312	0.733694	-1.71166	-3.15819	0.0002	0.00284504	yes
MFSD7	chr4:671710-682973	TTD7PVmother_uv	TTD7PV_uv	OK	7.57323	1.33737	-2.50151	-3.76204	5.00E-05	0.000851213	yes
MGARP	chr4:140187316-140201492	TTD7PVmother_uv	TTD7PV_uv	OK	12.8661	3.46197	-1.8939	-5.07156	5.00E-05	0.000851213	yes
MGP	chr12:15034114-15038853	TTD7PVmother_uv	TTD7PV_uv	OK	4.48696	9.69814	1.11197	2.53316	5.00E-05	0.000851213	yes
MICA	chr6_ssto_hap7:2701358-2716888	TTD7PVmother_uv	TTD7PV_uv	OK	26.3271	9.79011	-1.42715	-3.81502	5.00E-05	0.000851213	yes
MIR210HG	chr11:565656-568457	TTD7PVmother_uv	TTD7PV_uv	OK	1.84752	0.481323	-1.94051	-3.13785	5.00E-05	0.000851213	yes
MLPH	chr2:238395877-238463961	TTD7PVmother_uv	TTD7PV_uv	OK	1.15853	0.180085	-2.68555	-3.91911	5.00E-05	0.000851213	yes
MMD	chr17:53469973-53499341	TTD7PVmother_uv	TTD7PV_uv	OK	2.38684	1.11381	-1.0996	-2.67957	0.00065	0.00748478	yes
MMP10	chr11:102641232-102651359	TTD7PVmother_uv	TTD7PV_uv	OK	2.78974	0.422396	-2.72346	-4.83019	5.00E-05	0.000851213	yes
MMP12	chr11:102733463-102745764	TTD7PVmother_uv	TTD7PV_uv	OK	3.38599	0.675119	-2.32636	-4.34248	5.00E-05	0.000851213	yes
MMP15	chr16:58059281-58080804	TTD7PVmother_uv	TTD7PV_uv	OK	4.20911	2.06177	-1.02963	-2.85914	5.00E-05	0.000851213	yes
MMP3	chr11:102654406-102714342	TTD7PVmother_uv	TTD7PV_uv	OK	233.377	77.7796	-1.5852	-1.77779	0.00375	0.0309406	yes
MMS19	chr10:99218080-99258366	TTD7PVmother_uv	TTD7PV_uv	OK	6.43011	15.8963	1.30578	4.36085	5.00E-05	0.000851213	yes
MNS1	chr15:56657643-56757335	TTD7PVmother_uv	TTD7PV_uv	OK	1.06517	2.17211	1.02801	1.59327	0.0042	0.0338141	yes
MOXD1	chr6:132617193-132722664	TTD7PVmother_uv	TTD7PV_uv	OK	63.3553	27.5928	-1.19918	-4.1454	5.00E-05	0.000851213	yes
MRAP2	chr6:84743419-84800605	TTD7PVmother_uv	TTD7PV_uv	OK	2.19611	0.523725	-2.06807	-3.87523	5.00E-05	0.000851213	yes
MREG	chr2:216807313-216878346	TTD7PVmother_uv	TTD7PV_uv	OK	1.81574	0.803197	-1.17673	-2.5304	0.0003	0.00396402	yes

MRVI1	chr11:10562782-10715535	TTD7PVmother_uv	TTD7PV_uv	OK	4.07286	0.177224	-4.5224	-8.10038	5.00E-05	0.000851213	yes
MSR1	chr8:15965386-16050300	TTD7PVmother_uv	TTD7PV_uv	OK	0.122327	0.836773	2.77409	3.45642	5.00E-05	0.000851213	yes
MSTN	chr2:190920425-190927455	TTD7PVmother_uv	TTD7PV_uv	OK	0.517292	3.64049	2.81508	5.6288	5.00E-05	0.000851213	yes
MSX2	chr5:174151574-174157902	TTD7PVmother_uv	TTD7PV_uv	OK	0.673163	0.184216	-1.86956	-2.78187	0.00155	0.015237	yes
MX1	chr21:42792519-42831141	TTD7PVmother_uv	TTD7PV_uv	OK	0.809738	1.97824	1.28869	2.4044	5.00E-05	0.000851213	yes
MYBL2	chr20:42295708-42345122	TTD7PVmother_uv	TTD7PV_uv	OK	4.33971	9.12567	1.07233	3.02836	5.00E-05	0.000851213	yes
MYEOV	chr11:69061621-69064754	TTD7PVmother_uv	TTD7PV_uv	OK	0.611089	0.114114	-2.4209	-3.03693	0.00055	0.00656053	yes
MYL9	chr20:35169886-35178226	TTD7PVmother_uv	TTD7PV_uv	OK	598.735	290.753	-1.04212	-2.75732	5.00E-05	0.000851213	yes
MYLK	chr3:123304402-123603149	TTD7PVmother_uv	TTD7PV_uv	OK	27.7989	7.1684	-1.95531	-4.95606	5.00E-05	0.000851213	yes
NBL1	chr1:19923470-19984949	TTD7PVmother_uv	TTD7PV_uv	OK	150.092	70.9329	-1.08132	-2.7184	5.00E-05	0.000851213	yes
NCKAP5	chr2:133429371-134326031	TTD7PVmother_uv	TTD7PV_uv	OK	0.287297	0.728702	1.34279	2.05591	0.00065	0.00748478	yes
NDRG2	chr14:21484921-21493935	TTD7PVmother_uv	TTD7PV_uv	OK	0.999659	0.24089	-2.05306	-2.35355	0.0001	0.00155758	yes
NDRG4	chr16:58497548-58547523	TTD7PVmother_uv	TTD7PV_uv	OK	1.52701	0.67428	-1.17929	-2.09735	0.00035	0.00451604	yes
NEFH	chr22:29876180-29887277	TTD7PVmother_uv	TTD7PV_uv	OK	0.415816	0.90838	1.12735	1.91987	0.0011	0.0115122	yes
NEGR1	chr1:71868624-72748277	TTD7PVmother_uv	TTD7PV_uv	OK	5.21384	2.46485	-1.08085	-3.32052	5.00E-05	0.000851213	yes
NEK10	chr3:27257096-27410912	TTD7PVmother_uv	TTD7PV_uv	OK	0.996059	0.295293	-1.75408	-2.80398	0.00015	0.00220839	yes
NKX3-1	chr8:23536205-23540450	TTD7PVmother_uv	TTD7PV_uv	OK	6.57091	2.5181	-1.38375	-3.60131	5.00E-05	0.000851213	yes
NOTCH3	chr19:15270443-15311792	TTD7PVmother_uv	TTD7PV_uv	OK	7.03686	1.61189	-2.12618	-6.52119	5.00E-05	0.000851213	yes
NPM3	chr10:103541081-103543170	TTD7PVmother_uv	TTD7PV_uv	OK	19.0548	38.8702	1.02851	4.11234	5.00E-05	0.000851213	yes
NPR1	chr1:153651163-153666468	TTD7PVmother_uv	TTD7PV_uv	OK	3.39797	0.212927	-3.99625	-7.26302	5.00E-05	0.000851213	yes
NPTX2	chr7:98246596-98259181	TTD7PVmother_uv	TTD7PV_uv	OK	0.418956	1.10687	1.40161	2.45458	0.0008	0.00892721	yes
NPTXR	chr22:39214455-39240017	TTD7PVmother_uv	TTD7PV_uv	OK	4.77529	1.94732	-1.2941	-3.72086	5.00E-05	0.000851213	yes
NQO1	chr16:69743303-69760533	TTD7PVmother_uv	TTD7PV_uv	OK	63.6393	143.753	1.1756	3.62003	5.00E-05	0.000851213	yes
NR4A3	chr9:102584136-102629173	TTD7PVmother_uv	TTD7PV_uv	OK	8.38209	3.79835	-1.14194	-2.4627	5.00E-05	0.000851213	yes
NRG1	chr8:31497267-32622558	TTD7PVmother_uv	TTD7PV_uv	OK	7.95391	18.1951	1.19382	2.99793	5.00E-05	0.000851213	yes
NRP2	chr2:206547223-206662857	TTD7PVmother_uv	TTD7PV_uv	OK	9.2126	4.39856	-1.06658	-2.87713	5.00E-05	0.000851213	yes
NTNG1	chr1:107682628-108024475	TTD7PVmother_uv	TTD7PV_uv	OK	3.50258	7.68748	1.13409	2.87024	5.00E-05	0.000851213	yes
NTRK2	chr9:87283465-87638505	TTD7PVmother_uv	TTD7PV_uv	OK	0.192931	0.741124	1.94163	3.15562	5.00E-05	0.000851213	yes
NXPH3	chr17:47653297-47661171	TTD7PVmother_uv	TTD7PV_uv	OK	0.648453	0.0671115	-3.27237	-4.39591	5.00E-05	0.000851213	yes
OIP5	chr15:41601465-41624819	TTD7PVmother_uv	TTD7PV_uv	OK	2.19323	4.43274	1.01514	2.4339	0.0018	0.0172255	yes
OSBP2	chr22:31090792-31303811	TTD7PVmother_uv	TTD7PV_uv	OK	0.892324	0.431562	-1.048	-1.78317	0.0016	0.0156192	yes
OSBPL7	chr17:45884732-45899147	TTD7PVmother_uv	TTD7PV_uv	OK	1.19944	2.48937	1.05342	2.40673	0.00025	0.00340302	yes
OSCAR	chr19:54597932-54604148	TTD7PVmother_uv	TTD7PV_uv	OK	1.53582	0.387889	-1.98529	-2.19864	0.0001	0.00155758	yes
OSR2	chr8:99956630-99964326	TTD7PVmother_uv	TTD7PV_uv	OK	15.2735	4.90558	-1.63854	-4.17957	5.00E-05	0.000851213	yes
OTUD1	chr10:23728197-23731310	TTD7PVmother_uv	TTD7PV_uv	OK	5.45032	2.06165	-1.40255	-4.02525	5.00E-05	0.000851213	yes
OXTR	chr3:8792094-8811300	TTD7PVmother_uv	TTD7PV_uv	OK	23.6266	11.3468	-1.05813	-3.16472	5.00E-05	0.000851213	yes
PABPC4L	chr4:135117488-135122903	TTD7PVmother_uv	TTD7PV_uv	OK	0.632592	1.38703	1.13265	2.65298	0.00025	0.00340302	yes

PALLD	chr4:169418216-169849608	TTD7PVmother_uv	TTD7PV_uv	OK	24.5868	11.2384	-1.12944	-3.62617	5.00E-05	0.000851213 yes
PAPPA2	chr1:176432306-176811970	TTD7PVmother_uv	TTD7PV_uv	OK	2.03548	12.6954	2.64086	7.27937	5.00E-05	0.000851213 yes
PARD6G	chr18:77905806-78005397	TTD7PVmother_uv	TTD7PV_uv	OK	1.89028	0.836268	-1.17656	-2.38226	0.0001	0.00155758 yes
PAX8	chr2:113973573-114036498	TTD7PVmother_uv	TTD7PV_uv	OK	0.606657	0.0495848	-3.61291	-2.48712	5.00E-05	0.000851213 yes
PBX3	chr9:128509616-128729655	TTD7PVmother_uv	TTD7PV_uv	OK	11.3817	5.35427	-1.08796	-3.09407	5.00E-05	0.000851213 yes
PBX4	chr19:19672515-19729725	TTD7PVmother_uv	TTD7PV_uv	OK	0.536722	0.146934	-1.86901	-1.73333	0.00435	0.034778 yes
PCDH1	chr5:141232672-141257944	TTD7PVmother_uv	TTD7PV_uv	OK	0.55048	1.17087	1.08881	1.95384	0.00105	0.0111179 yes
PCDH10	chr4:134070469-134112732	TTD7PVmother_uv	TTD7PV_uv	OK	2.3793	11.0743	2.2186	6.34958	5.00E-05	0.000851213 yes
PCDH7	chr4:30722029-31148423	TTD7PVmother_uv	TTD7PV_uv	OK	3.6093	0.818944	-2.13988	-4.77414	5.00E-05	0.000851213 yes
PCDHB10	chr5:140571951-140575213	TTD7PVmother_uv	TTD7PV_uv	OK	0.63817	0.256685	-1.31394	-2.24345	0.00175	0.0168363 yes
PCDHB16	chr5:140560979-140565796	TTD7PVmother_uv	TTD7PV_uv	OK	1.02952	0.506617	-1.02301	-2.13696	0.0011	0.0115122 yes
PCDHB5	chr5:140514799-140517704	TTD7PVmother_uv	TTD7PV_uv	OK	0.572595	1.43642	1.32689	2.57748	0.0002	0.00284505 yes
PCSK1	chr5:95726039-95768985	TTD7PVmother_uv	TTD7PV_uv	OK	0.875444	2.60839	1.57508	3.56931	5.00E-05	0.000851213 yes
PCSK1N	chrX:48689503-48694036	TTD7PVmother_uv	TTD7PV_uv	OK	2.26578	11.0723	2.28888	6.19001	5.00E-05	0.000851213 yes
PCSK5	chr9:78505559-78977255	TTD7PVmother_uv	TTD7PV_uv	OK	4.38424	2.0386	-1.10475	-2.4985	5.00E-05	0.000851213 yes
PCSK9	chr1:55505148-55530526	TTD7PVmother_uv	TTD7PV_uv	OK	7.267	14.7997	1.02613	3.18829	5.00E-05	0.000851213 yes
PDE1C	chr7:31792631-32338383	TTD7PVmother_uv	TTD7PV_uv	OK	3.29918	6.95387	1.07571	2.3187	5.00E-05	0.000851213 yes
PDE4B	chr1:66258192-66840262	TTD7PVmother_uv	TTD7PV_uv	OK	2.07808	0.7287	-1.51186	-2.9452	5.00E-05	0.000851213 yes
PDGFRL	chr8:17433941-17500642	TTD7PVmother_uv	TTD7PV_uv	OK	6.39569	2.94646	-1.11812	-2.86669	5.00E-05	0.000851213 yes
PEX6	chr6:42928499-42946981	TTD7PVmother_uv	TTD7PV_uv	OK	3.74108	8.85639	1.24326	3.48218	5.00E-05	0.000851213 yes
PFKFB4	chr3:48555116-48594227	TTD7PVmother_uv	TTD7PV_uv	OK	0.691315	0.323254	-1.09668	-1.82983	0.00575	0.0431318 yes
PGM2L1	chr11:74041360-74109502	TTD7PVmother_uv	TTD7PV_uv	OK	1.76681	0.844457	-1.06505	-2.84665	5.00E-05	0.000851213 yes
PHGDH	chr1:120254418-120286849	TTD7PVmother_uv	TTD7PV_uv	OK	89.7248	205.478	1.1954	3.98494	5.00E-05	0.000851213 yes
PIANP	chr12:6802956-6810009	TTD7PVmother_uv	TTD7PV_uv	OK	1.69006	0.6467	-1.38591	-2.36489	0.0001	0.00155758 yes
PIK3IP1	chr22:31677578-31688520	TTD7PVmother_uv	TTD7PV_uv	OK	17.8083	5.15735	-1.78785	-4.85794	5.00E-05	0.000851213 yes
PINLYP	chr19:44080951-44086256	TTD7PVmother_uv	TTD7PV_uv	OK	2.13613	6.20039	1.53736	2.2492	0.00095	0.0102305 yes
PIR	chrX:15363712-15511711	TTD7PVmother_uv	TTD7PV_uv	OK	3.08236	6.41546	1.05752	2.23694	0.0002	0.00284504 yes
PITPNM3	chr17:6354582-6459877	TTD7PVmother_uv	TTD7PV_uv	OK	1.20149	0.288075	-2.06031	-3.85268	5.00E-05	0.000851213 yes
PITX1	chr5:134363423-134369964	TTD7PVmother_uv	TTD7PV_uv	OK	0.917855	0.0673667	-3.76816	-4.01769	0.00065	0.00748478 yes
PLCB4	chr20:9049700-9461462	TTD7PVmother_uv	TTD7PV_uv	OK	3.43016	0.95224	-1.84888	-4.32173	5.00E-05	0.000851213 yes
PLCL1	chr2:198669425-199014608	TTD7PVmother_uv	TTD7PV_uv	OK	0.772327	0.315994	-1.28932	-2.51073	0.00025	0.00340302 yes
PLD1	chr3:171318194-171528284	TTD7PVmother_uv	TTD7PV_uv	OK	0.6113	1.252	1.03428	2.15287	0.00035	0.00451604 yes
PLEKHA6	chr1:204187978-204329057	TTD7PVmother_uv	TTD7PV_uv	OK	1.01338	0.264185	-1.93955	-3.8175	5.00E-05	0.000851213 yes
PLEKHO2	chr15:65134081-65160201	TTD7PVmother_uv	TTD7PV_uv	OK	11.005	5.39899	-1.0274	-3.02268	5.00E-05	0.000851213 yes
PLXNB1	chr3:48445260-48471460	TTD7PVmother_uv	TTD7PV_uv	OK	10.8576	4.69796	-1.2086	-3.69576	5.00E-05	0.000851213 yes
PLXNB3	chrX:153029650-153044801	TTD7PVmother_uv	TTD7PV_uv	OK	3.37735	1.12396	-1.58731	-4.03757	5.00E-05	0.000851213 yes
PLXNC1	chr12:94542498-94701451	TTD7PVmother_uv	TTD7PV_uv	OK	2.63733	0.772212	-1.77201	-3.28842	5.00E-05	0.000851213 yes

PMP22	chr17:15133095-15168644	TTD7PVmother_uv	TTD7PV_uv	OK	202.706	88.8976	-1.18918	-3.58389	5.00E-05	0.000851213	yes
PNMAL1	chr19:46969747-46974820	TTD7PVmother_uv	TTD7PV_uv	OK	3.72866	0.726965	-2.3587	-4.85462	5.00E-05	0.000851213	yes
PNMAL2	chr19:46984044-47104457	TTD7PVmother_uv	TTD7PV_uv	OK	1.32729	0.643125	-1.04531	-1.9704	0.00055	0.00656053	yes
PNPLA7	chr9:140354404-140444986	TTD7PVmother_uv	TTD7PV_uv	OK	1.07293	0.321443	-1.73892	-3.06641	5.00E-05	0.000851213	yes
POSTN	chr13:38136718-38172981	TTD7PVmother_uv	TTD7PV_uv	OK	218.469	932.429	2.09357	2.92413	5.00E-05	0.000851213	yes
PPAP2C	chr19:281043-291435	TTD7PVmother_uv	TTD7PV_uv	OK	6.47769	2.60493	-1.31423	-2.57371	5.00E-05	0.000851213	yes
PPAPDC3	chr9:134165080-134184649	TTD7PVmother_uv	TTD7PV_uv	OK	2.06494	0.371649	-2.47409	-4.28584	5.00E-05	0.000851213	yes
PPFIA4	chr1:203020310-203047864	TTD7PVmother_uv	TTD7PV_uv	OK	0.920765	0.211894	-2.11949	-3.49294	5.00E-05	0.000851213	yes
PPFIBP2	chr11:7534995-7674996	TTD7PVmother_uv	TTD7PV_uv	OK	6.34976	2.69676	-1.23547	-3.04725	5.00E-05	0.000851213	yes
PPP1R14A	chr19:38741876-38747231	TTD7PVmother_uv	TTD7PV_uv	OK	7.22301	0.563495	-3.68013	-3.54592	5.00E-05	0.000851213	yes
PPP1R1C	chr2:182818967-182996109	TTD7PVmother_uv	TTD7PV_uv	OK	0.494569	0.129298	-1.93547	-1.37319	0.00635	0.0465004	yes
PPP1R3C	chr10:93388196-93392858	TTD7PVmother_uv	TTD7PV_uv	OK	67.7063	32.832	-1.04419	-3.76421	5.00E-05	0.000851213	yes
PPP1R3G	chr6:5085719-5087455	TTD7PVmother_uv	TTD7PV_uv	OK	3.19576	1.06965	-1.57901	-3.44355	5.00E-05	0.000851213	yes
PRDM16	chr1:2985741-3355185	TTD7PVmother_uv	TTD7PV_uv	OK	0.194381	0.905161	2.21929	4.02064	5.00E-05	0.000851213	yes
PRELP	chr1:203444882-203460479	TTD7PVmother_uv	TTD7PV_uv	OK	4.65977	0.843125	-2.46644	-5.82984	5.00E-05	0.000851213	yes
PRICKLE1	chr12:42852139-42983572	TTD7PVmother_uv	TTD7PV_uv	OK	1.33673	0.62506	-1.09664	-2.09095	0.0004	0.00504775	yes
PRIM1	chr12:57125363-57146146	TTD7PVmother_uv	TTD7PV_uv	OK	1.71932	3.72208	1.11427	2.52514	0.00055	0.00656053	yes
PRIMA1	chr14:94184643-94254766	TTD7PVmother_uv	TTD7PV_uv	OK	0.768618	0.185195	-2.05322	-3.18421	5.00E-05	0.000851213	yes
PROSAPIP1	chr20:3143272-3149207	TTD7PVmother_uv	TTD7PV_uv	OK	3.82267	1.87817	-1.02525	-2.89587	5.00E-05	0.000851213	yes
PRSS3	chr9:33750463-33799229	TTD7PVmother_uv	TTD7PV_uv	OK	1.42536	0.498684	-1.51512	-1.60533	0.00345	0.0290342	yes
PRSS35	chr6:84222193-84235421	TTD7PVmother_uv	TTD7PV_uv	OK	0.64749	0.115643	-2.48518	-2.7143	0.00025	0.00340302	yes
PRUNE2	chr9:79226291-79521003	TTD7PVmother_uv	TTD7PV_uv	OK	7.67224	1.04029	-2.88266	-8.12055	5.00E-05	0.000851213	yes
PSEN2	chr1:227058272-227083804	TTD7PVmother_uv	TTD7PV_uv	OK	7.79138	2.98647	-1.38344	-3.33804	5.00E-05	0.000851213	yes
PSG1	chr19:43370612-43383871	TTD7PVmother_uv	TTD7PV_uv	OK	31.5547	1.90653	-4.04883	-8.91667	5.00E-05	0.000851213	yes
PSG2	chr19:43568361-43586893	TTD7PVmother_uv	TTD7PV_uv	OK	5.05564	2.39017	-1.08078	-2.62935	0.00015	0.00220839	yes
PSG4	chr19:43696853-43709926	TTD7PVmother_uv	TTD7PV_uv	OK	0.892921	41.7501	5.5471	11.0178	5.00E-05	0.000851213	yes
PSG9	chr19:43757434-43773682	TTD7PVmother_uv	TTD7PV_uv	OK	1.74567	0.71824	-1.28124	-2.36149	0.00105	0.0111179	yes
PTGES	chr9:132500614-132515344	TTD7PVmother_uv	TTD7PV_uv	OK	51.6261	25.7328	-1.00449	-3.82896	5.00E-05	0.000851213	yes
PTGIS	chr20:48120410-48184707	TTD7PVmother_uv	TTD7PV_uv	OK	87.3823	11.7796	-2.89105	-8.48314	5.00E-05	0.000851213	yes
PTGS1	chr9:125132808-125157982	TTD7PVmother_uv	TTD7PV_uv	OK	15.9399	4.73942	-1.74986	-5.27366	5.00E-05	0.000851213	yes
PTH1R	chr3:46919235-46945289	TTD7PVmother_uv	TTD7PV_uv	OK	0.834484	2.36713	1.50418	2.69776	5.00E-05	0.000851213	yes
PTHLH	chr12:28111016-28124916	TTD7PVmother_uv	TTD7PV_uv	OK	1.79924	0.547223	-1.71719	-2.42755	5.00E-05	0.000851213	yes
PTPRN	chr2:220154344-220174295	TTD7PVmother_uv	TTD7PV_uv	OK	7.35473	3.59301	-1.03348	-2.64044	5.00E-05	0.000851213	yes
PTPRU	chr1:29563027-29653325	TTD7PVmother_uv	TTD7PV_uv	OK	5.41593	2.50882	-1.1102	-3.13153	5.00E-05	0.000851213	yes
PYCR1	chr17:79890266-79894968	TTD7PVmother_uv	TTD7PV_uv	OK	41.6285	91.6175	1.13805	3.46122	5.00E-05	0.000851213	yes
QPRT	chr16:29690440-29709314	TTD7PVmother_uv	TTD7PV_uv	OK	20.9204	5.82216	-1.84529	-5.31321	5.00E-05	0.000851213	yes
RAB20	chr13:111175412-111214071	TTD7PVmother_uv	TTD7PV_uv	OK	0.600879	0.121979	-2.30045	-2.38208	0.00425	0.0341297	yes

RAB39B	chrX:154487525-154493852	TTD7PVmother_uv	TTD7PV_uv	OK	0.376838	1.09531	1.53933	2.83485	5.00E-05	0.000851213	yes
RAB3B	chr1:52373627-52456436	TTD7PVmother_uv	TTD7PV_uv	OK	8.71835	4.10201	-1.08772	-3.5558	5.00E-05	0.000851213	yes
RAC2	chr22:37621309-37640305	TTD7PVmother_uv	TTD7PV_uv	OK	9.95782	4.95624	-1.00658	-2.86548	0.0001	0.00155758	yes
RARRES2	chr7:150035406-150038763	TTD7PVmother_uv	TTD7PV_uv	OK	9.62868	28.5835	1.56977	5.38081	5.00E-05	0.000851213	yes
RASD1	chr17:17397752-17399709	TTD7PVmother_uv	TTD7PV_uv	OK	10.5716	3.36822	-1.65014	-3.91745	5.00E-05	0.000851213	yes
RASD2	chr22:35937351-35950045	TTD7PVmother_uv	TTD7PV_uv	OK	1.58961	0.10636	-3.90164	-4.84694	5.00E-05	0.000851213	yes
RASSF3	chr12:65004292-65091347	TTD7PVmother_uv	TTD7PV_uv	OK	4.46483	1.81307	-1.30017	-3.29845	5.00E-05	0.000851213	yes
RASSF5	chr1:206680878-206762616	TTD7PVmother_uv	TTD7PV_uv	OK	1.00051	0.393929	-1.34473	-2.24449	0.0001	0.00155758	yes
RASSF7	chr11:560970-564025	TTD7PVmother_uv	TTD7PV_uv	OK	1.54876	0.613102	-1.33692	-1.98849	0.0009	0.0098346	yes
RBM24	chr6:17281808-17294099	TTD7PVmother_uv	TTD7PV_uv	OK	3.01048	0.985079	-1.61168	-3.33889	5.00E-05	0.000851213	yes
RBP1	chr3:139236275-139258671	TTD7PVmother_uv	TTD7PV_uv	OK	0.499643	1.96172	1.97315	2.17801	0.001	0.010687	yes
RENBP	chrX:153200721-153210232	TTD7PVmother_uv	TTD7PV_uv	OK	12.9879	4.10389	-1.6621	-4.50928	5.00E-05	0.000851213	yes
RGN	chrX:46937774-46952712	TTD7PVmother_uv	TTD7PV_uv	OK	1.25841	0.579674	-1.11829	-1.67379	0.00585	0.043752	yes
RGS3	chr9:116207008-116360023	TTD7PVmother_uv	TTD7PV_uv	OK	49.2601	12.4185	-1.98793	-5.43034	5.00E-05	0.000851213	yes
RHOJ	chr14:63671101-63760230	TTD7PVmother_uv	TTD7PV_uv	OK	2.81686	6.26424	1.15305	3.35702	5.00E-05	0.000851213	yes
RILP	chr17:1549444-1553392	TTD7PVmother_uv	TTD7PV_uv	OK	2.81442	1.4043	-1.00299	-2.17888	0.0015	0.0148612	yes
RIMS1	chr6:72596405-73112845	TTD7PVmother_uv	TTD7PV_uv	OK	1.32104	0.0885693	-3.89873	-4.68716	5.00E-05	0.000851213	yes
RIPK3	chr14:24805226-24809242	TTD7PVmother_uv	TTD7PV_uv	OK	8.46223	2.61166	-1.69607	-4.35694	5.00E-05	0.000851213	yes
RNF144A	chr2:7052406-7184309	TTD7PVmother_uv	TTD7PV_uv	OK	1.11632	0.360666	-1.63001	-3.05346	5.00E-05	0.000851213	yes
RNF157	chr17:74132414-74236390	TTD7PVmother_uv	TTD7PV_uv	OK	0.772175	0.188419	-2.03498	-3.12586	5.00E-05	0.000851213	yes
RPL22L1	chr3:170582664-170588045	TTD7PVmother_uv	TTD7PV_uv	OK	15.4476	33.4673	1.11537	4.30624	5.00E-05	0.000851213	yes
RPL36A	chrX:100645877-100669128	TTD7PVmother_uv	TTD7PV_uv	OK	193.891	399.102	1.04151	3.15116	5.00E-05	0.000851213	yes
RPP25	chr15:75247442-75249775	TTD7PVmother_uv	TTD7PV_uv	OK	4.56822	1.40309	-1.70303	-4.06307	5.00E-05	0.000851213	yes
RPS21	chr20:60962120-60963576	TTD7PVmother_uv	TTD7PV_uv	OK	428.65	907.75	1.08249	11.0637	5.00E-05	0.000851213	yes
RPS3	chr11:75110534-75133345	TTD7PVmother_uv	TTD7PV_uv	OK	367.304	745.543	1.02132	3.2314	5.00E-05	0.000851213	yes
RPSAP58	chr19:23945815-24010919	TTD7PVmother_uv	TTD7PV_uv	OK	4.8296	19.0202	1.97756	5.90524	5.00E-05	0.000851213	yes
RSPO3	chr6:127440047-127518184	TTD7PVmother_uv	TTD7PV_uv	OK	38.0338	6.83344	-2.4766	-7.47042	5.00E-05	0.000851213	yes
RTN4RL1	chr17:1837970-1928178	TTD7PVmother_uv	TTD7PV_uv	OK	0.931091	0.419134	-1.15151	-1.99125	0.0026	0.0231127	yes
RUNX3	chr1:25226001-25291501	TTD7PVmother_uv	TTD7PV_uv	OK	1.16219	0.529519	-1.13409	-2.17077	0.00075	0.00843633	yes
S1PR1	chr1:101702304-101707076	TTD7PVmother_uv	TTD7PV_uv	OK	7.46128	15.3312	1.03897	3.38647	5.00E-05	0.000851213	yes
S1PR5	chr19:10623417-10628668	TTD7PVmother_uv	TTD7PV_uv	OK	0.749978	0.0670058	-3.48449	-2.86448	0.0006	0.00701778	yes
SALL1	chr16:51169885-51185183	TTD7PVmother_uv	TTD7PV_uv	OK	1.49753	0.206617	-2.85756	-4.94773	5.00E-05	0.000851213	yes
SAMD11	chr1:861120-894679	TTD7PVmother_uv	TTD7PV_uv	OK	13.1719	39.092	1.56941	2.33666	0.0036	0.0300762	yes
SBSPON	chr8:73976777-74005507	TTD7PVmother_uv	TTD7PV_uv	OK	1.13923	0.0696628	-4.03153	-5.3278	5.00E-05	0.000851213	yes
SCAMP5	chr15:75287875-75313836	TTD7PVmother_uv	TTD7PV_uv	OK	1.05476	0.445508	-1.24339	-2.16869	0.00045	0.00555117	yes
SCG2	chr2:224461657-224467217	TTD7PVmother_uv	TTD7PV_uv	OK	4.40614	0.884186	-2.31709	-5.03101	5.00E-05	0.000851213	yes
SCG5	chr15:32933869-32989298	TTD7PVmother_uv	TTD7PV_uv	OK	5.09024	1.84916	-1.46086	-2.6448	5.00E-05	0.000851213	yes

SCIN	chr7:12610202-12693228	TTD7PVmother_uv	TTD7PV_uv	OK	5.23744	0.70794	-2.88716	-5.58343	5.00E-05	0.000851213	yes
SCN9A	chr2:167051696-167232497	TTD7PVmother_uv	TTD7PV_uv	OK	1.01426	0.0925783	-3.45361	-6.03664	5.00E-05	0.000851213	yes
SCRG1	chr4:174309298-174320617	TTD7PVmother_uv	TTD7PV_uv	OK	9.45863	23.8802	1.33611	4.02699	5.00E-05	0.000851213	yes
SCUBE3	chr6:35182189-35218609	TTD7PVmother_uv	TTD7PV_uv	OK	3.43964	0.187545	-4.19695	-7.00973	5.00E-05	0.000851213	yes
SDPR	chr2:192699031-192712006	TTD7PVmother_uv	TTD7PV_uv	OK	4.83351	1.82279	-1.40693	-3.5902	5.00E-05	0.000851213	yes
SEC16B	chr1:177898241-177939050	TTD7PVmother_uv	TTD7PV_uv	OK	0.769052	1.69193	1.13752	2.37553	5.00E-05	0.000851213	yes
SEL1L3	chr4:25749048-25864610	TTD7PVmother_uv	TTD7PV_uv	OK	6.57126	14.046	1.09592	2.96316	5.00E-05	0.000851213	yes
SERINC2	chr1:31882411-31907527	TTD7PVmother_uv	TTD7PV_uv	OK	25.9824	11.3836	-1.19058	-3.71359	5.00E-05	0.000851213	yes
SERPINA3	chr14:95078713-95090390	TTD7PVmother_uv	TTD7PV_uv	OK	0.864436	0.343941	-1.3296	-1.93661	0.00645	0.0469875	yes
SERPINB2	chr18:61554938-61571124	TTD7PVmother_uv	TTD7PV_uv	OK	27.4653	11.5433	-1.25055	-3.60532	5.00E-05	0.000851213	yes
SERPINB7	chr18:61420280-61472610	TTD7PVmother_uv	TTD7PV_uv	OK	5.66389	0.718674	-2.97838	-5.39076	5.00E-05	0.000851213	yes
SERPINH1	chr11:75273100-75283849	TTD7PVmother_uv	TTD7PV_uv	OK	383.396	850.69	1.1498	2.42181	0.0001	0.00155758	yes
SERPINI1	chr3:167453431-167543357	TTD7PVmother_uv	TTD7PV_uv	OK	2.11702	0.681639	-1.63495	-2.58476	0.0001	0.00155758	yes
SEZ6L2	chr16:29882479-29910585	TTD7PVmother_uv	TTD7PV_uv	OK	8.92873	2.23999	-1.99496	-4.76052	5.00E-05	0.000851213	yes
SFRP4	chr7:37945534-37956525	TTD7PVmother_uv	TTD7PV_uv	OK	17.2306	0.356144	-5.59637	-9.94882	5.00E-05	0.000851213	yes
SGIP1	chr1:66999824-67210768	TTD7PVmother_uv	TTD7PV_uv	OK	2.40402	0.415838	-2.53136	-5.14468	5.00E-05	0.000851213	yes
SGK223	chr8:8175257-8239257	TTD7PVmother_uv	TTD7PV_uv	OK	1.50467	0.227857	-2.72325	-4.42006	5.00E-05	0.000851213	yes
SH2D5	chr1:21046224-21059133	TTD7PVmother_uv	TTD7PV_uv	OK	5.55535	2.44549	-1.18375	-3.02542	5.00E-05	0.000851213	yes
SH3BGR	chr21:40817796-40887433	TTD7PVmother_uv	TTD7PV_uv	OK	3.60615	23.2489	2.68863	5.67761	5.00E-05	0.000851213	yes
SH3GL3	chr15:84116090-84287493	TTD7PVmother_uv	TTD7PV_uv	OK	0.102297	0.487601	2.25293	1.78057	0.00395	0.0322328	yes
SHC2	chr19:416582-460996	TTD7PVmother_uv	TTD7PV_uv	OK	2.42901	1.06486	-1.1897	-2.47842	0.00035	0.00451604	yes
SHC3	chr9:91620685-91793682	TTD7PVmother_uv	TTD7PV_uv	OK	0.964029	0.0764671	-3.65617	-6.17661	5.00E-05	0.000851213	yes
SLC16A2	chrX:73641327-73753764	TTD7PVmother_uv	TTD7PV_uv	OK	25.8696	11.9026	-1.11998	-3.8695	5.00E-05	0.000851213	yes
SLC16A3	chr17:80186281-80197375	TTD7PVmother_uv	TTD7PV_uv	OK	82.3181	26.7479	-1.62178	-5.24272	5.00E-05	0.000851213	yes
SLC22A23	chr6:3269206-3456793	TTD7PVmother_uv	TTD7PV_uv	OK	9.69175	4.82145	-1.00729	-3.21556	5.00E-05	0.000851213	yes
SLC25A30	chr13:45967453-45992516	TTD7PVmother_uv	TTD7PV_uv	OK	6.50197	3.17695	-1.03324	-3.11491	5.00E-05	0.000851213	yes
SLC2A1	chr1:43391045-43449029	TTD7PVmother_uv	TTD7PV_uv	OK	11.6781	5.76188	-1.01919	-3.22489	5.00E-05	0.000851213	yes
SLC2A8	chr9:130159416-130170170	TTD7PVmother_uv	TTD7PV_uv	OK	4.20991	1.69462	-1.31283	-2.75373	5.00E-05	0.000851213	yes
SLC30A4	chr15:45774679-45848928	TTD7PVmother_uv	TTD7PV_uv	OK	0.711549	0.242961	-1.55024	-2.5392	0.0003	0.00396402	yes
SLC31A2	chr9:115913237-115926422	TTD7PVmother_uv	TTD7PV_uv	OK	21.1869	6.02869	-1.81325	-5.75842	5.00E-05	0.000851213	yes
SLC40A1	chr2:190425315-190445537	TTD7PVmother_uv	TTD7PV_uv	OK	2.2049	0.67187	-1.71446	-3.67602	5.00E-05	0.000851213	yes
SLC44A3	chr1:95285897-95360803	TTD7PVmother_uv	TTD7PV_uv	OK	0.983782	0.336679	-1.54697	-2.15266	0.0004	0.00504775	yes
SLC4A3	chr2:220492291-220506702	TTD7PVmother_uv	TTD7PV_uv	OK	2.29453	0.720927	-1.67027	-3.3875	5.00E-05	0.000851213	yes
SLC4A4	chr4:72053002-72437804	TTD7PVmother_uv	TTD7PV_uv	OK	1.70441	0.696925	-1.29019	-3.09993	5.00E-05	0.000851213	yes
SLC6A17	chr1:110693131-110744823	TTD7PVmother_uv	TTD7PV_uv	OK	1.11746	0.428741	-1.38205	-2.81448	5.00E-05	0.000851213	yes
SLC7A14	chr3:170177341-170303863	TTD7PVmother_uv	TTD7PV_uv	OK	1.21103	0.555906	-1.12332	-2.72194	5.00E-05	0.000851213	yes
SLCO3A1	chr15:92396937-92715665	TTD7PVmother_uv	TTD7PV_uv	OK	4.12028	1.50712	-1.45095	-3.33947	5.00E-05	0.000851213	yes

SNCG	chr10:88718287-88723017	TTD7PVmother_uv	TTD7PV_uv	OK	1.25156	0.329793	-1.92409	-2.5959	0.0068	0.0485297	yes
SOCS1	chr16:11348273-11350039	TTD7PVmother_uv	TTD7PV_uv	OK	14.0986	6.6765	-1.07839	-3.65356	5.00E-05	0.000851213	yes
SOCS2	chr12:93959403-93970521	TTD7PVmother_uv	TTD7PV_uv	OK	6.89048	3.34172	-1.04401	-2.63143	5.00E-05	0.000851213	yes
SORBS2	chr4:186506597-186877870	TTD7PVmother_uv	TTD7PV_uv	OK	1.50428	0.288958	-2.38014	-3.69025	5.00E-05	0.000851213	yes
SORT1	chr1:109852187-109940563	TTD7PVmother_uv	TTD7PV_uv	OK	6.58631	1.94115	-1.76256	-5.17984	5.00E-05	0.000851213	yes
SOX8	chr16:1031807-1036979	TTD7PVmother_uv	TTD7PV_uv	OK	1.11516	0.286635	-1.95997	-3.4058	5.00E-05	0.000851213	yes
SP9	chr2:175199820-175202268	TTD7PVmother_uv	TTD7PV_uv	OK	6.71671	0.155784	-5.43014	-7.37116	5.00E-05	0.000851213	yes
SPINT2	chr19:38755097-38783254	TTD7PVmother_uv	TTD7PV_uv	OK	1.77128	0.650139	-1.44597	-2.23509	0.0005	0.00606142	yes
SPON1	chr11:13984183-14289679	TTD7PVmother_uv	TTD7PV_uv	OK	8.95287	4.36809	-1.03535	-3.15329	5.00E-05	0.000851213	yes
SPON2	chr4:1160720-1202750	TTD7PVmother_uv	TTD7PV_uv	OK	133.517	8.1546	-4.03327	-12.0052	5.00E-05	0.000851213	yes
SPP1	chr4:88896801-88904563	TTD7PVmother_uv	TTD7PV_uv	OK	11.4363	2.73412	-2.06447	-4.40463	5.00E-05	0.000851213	yes
SPTBN4	chr19:40973125-41082365	TTD7PVmother_uv	TTD7PV_uv	OK	0.726887	0.26707	-1.44452	-2.6219	5.00E-05	0.000851213	yes
SQRDL	chr15:45923345-45983492	TTD7PVmother_uv	TTD7PV_uv	OK	17.1842	8.069	-1.09062	-3.01077	5.00E-05	0.000851213	yes
SRGN	chr10:70847827-70864567	TTD7PVmother_uv	TTD7PV_uv	OK	7.07995	2.29251	-1.62681	-2.90617	5.00E-05	0.000851213	yes
ST6GALNAC3	chr1:76540388-77096669	TTD7PVmother_uv	TTD7PV_uv	OK	0.209915	3.82881	4.18902	5.09039	5.00E-05	0.000851213	yes
STAG3L1	chr7:74988428-74996914	TTD7PVmother_uv	TTD7PV_uv	OK	0.790324	0.330408	-1.25819	-1.97957	0.0039	0.0319486	yes
STARD8	chrX:67867510-67945684	TTD7PVmother_uv	TTD7PV_uv	OK	0.678343	0.217093	-1.6437	-2.45149	5.00E-05	0.000851213	yes
STBD1	chr4:77135192-77232283	TTD7PVmother_uv	TTD7PV_uv	OK	11.1259	5.12155	-1.11927	-3.17838	5.00E-05	0.000851213	yes
STC1	chr8:23699433-23712320	TTD7PVmother_uv	TTD7PV_uv	OK	6.76708	2.90802	-1.21849	-3.594	5.00E-05	0.000851213	yes
STC2	chr5:172741725-172756506	TTD7PVmother_uv	TTD7PV_uv	OK	180.959	66.2563	-1.44953	-3.76517	5.00E-05	0.000851213	yes
STEAP1B	chr7:22459062-22539901	TTD7PVmother_uv	TTD7PV_uv	OK	5.43292	0.415344	-3.70935	-5.35599	5.00E-05	0.000851213	yes
STK17B	chr2:196998306-197036336	TTD7PVmother_uv	TTD7PV_uv	OK	4.09257	1.83783	-1.155	-3.43443	5.00E-05	0.000851213	yes
STMN2	chr8:80523048-80578410	TTD7PVmother_uv	TTD7PV_uv	OK	174.996	5.54987	-4.97873	-12.486	5.00E-05	0.000851213	yes
STX1B	chr16:31000576-31021829	TTD7PVmother_uv	TTD7PV_uv	OK	0.795765	0.325514	-1.28962	-2.19851	0.00025	0.00340302	yes
STXBP2	chr19:7701986-7712760	TTD7PVmother_uv	TTD7PV_uv	OK	2.15016	0.347345	-2.63001	-3.49952	5.00E-05	0.000851213	yes
STXBP6	chr14:25281305-25519095	TTD7PVmother_uv	TTD7PV_uv	OK	1.98357	5.60064	1.49749	3.78225	5.00E-05	0.000851213	yes
SUSD5	chr3:33191536-33260707	TTD7PVmother_uv	TTD7PV_uv	OK	1.25084	0.306832	-2.02738	-3.88352	5.00E-05	0.000851213	yes
SVEP1	chr9:113127528-113342160	TTD7PVmother_uv	TTD7PV_uv	OK	19.5241	6.04711	-1.69094	-5.2387	5.00E-05	0.000851213	yes
SYBU	chr8:110586404-110704020	TTD7PVmother_uv	TTD7PV_uv	OK	3.89742	9.50826	1.28666	3.28107	5.00E-05	0.000851213	yes
SYNPO2	chr4:119809995-119982402	TTD7PVmother_uv	TTD7PV_uv	OK	26.526	2.06269	-3.68481	-10.1705	5.00E-05	0.000851213	yes
SYT14	chr1:210111518-210337633	TTD7PVmother_uv	TTD7PV_uv	OK	1.85175	4.48476	1.27614	3.43018	5.00E-05	0.000851213	yes
SYT7	chr11:61281187-61348344	TTD7PVmother_uv	TTD7PV_uv	OK	0.354221	0.845157	1.25457	2.202	0.0005	0.00606142	yes
TACSTD2	chr1:59041094-59043166	TTD7PVmother_uv	TTD7PV_uv	OK	0.737819	2.28705	1.63215	3.36292	5.00E-05	0.000851213	yes
TBX1	chr22:19744225-19771112	TTD7PVmother_uv	TTD7PV_uv	OK	8.11116	0.77913	-3.37997	-6.68286	5.00E-05	0.000851213	yes
TBXA2R	chr19:3594503-3606831	TTD7PVmother_uv	TTD7PV_uv	OK	1.7058	0.789379	-1.11165	-2.05421	0.00165	0.01607	yes
TCEAL7	chrX:102585113-102587251	TTD7PVmother_uv	TTD7PV_uv	OK	10.2617	4.78425	-1.1009	-3.26419	5.00E-05	0.000851213	yes
TCF21	chr6:134210258-134216675	TTD7PVmother_uv	TTD7PV_uv	OK	0.39838	3.06708	2.94465	3.77373	5.00E-05	0.000851213	yes

TCTEX1D1	chr1:67218139-67244730	TTD7PVmother_uv	TTD7PV_uv	OK	1.03845	0.337154	-1.62295	-2.97597	0.00045	0.00555117	yes
TEKT4P2	chr21:9907188-9968593	TTD7PVmother_uv	TTD7PV_uv	OK	27.3899	7.58449	-1.85252	-4.46348	5.00E-05	0.000851213	yes
TFAP2A	chr6:10396915-10419797	TTD7PVmother_uv	TTD7PV_uv	OK	0.871365	0.193227	-2.17298	-3.27309	5.00E-05	0.000851213	yes
TFAP2C	chr20:55204357-55214338	TTD7PVmother_uv	TTD7PV_uv	OK	2.39262	1.15833	-1.04654	-2.38268	0.0004	0.00504775	yes
TFPI2	chr7:93514708-93520303	TTD7PVmother_uv	TTD7PV_uv	OK	91.8712	28.209	-1.70346	-5.57213	5.00E-05	0.000851213	yes
TGM2	chr20:36756863-36793700	TTD7PVmother_uv	TTD7PV_uv	OK	36.2105	5.88452	-2.62141	-7.0526	5.00E-05	0.000851213	yes
THBS1	chr15:39873279-39889668	TTD7PVmother_uv	TTD7PV_uv	OK	824.766	212.738	-1.95491	-2.43799	0.00055	0.00656053	yes
THBS2	chr6:169615874-169654137	TTD7PVmother_uv	TTD7PV_uv	OK	165.257	66.8458	-1.3058	-3.44282	5.00E-05	0.000851213	yes
TIPARP	chr3:156390959-156424557	TTD7PVmother_uv	TTD7PV_uv	OK	7.17373	2.60767	-1.45996	-3.82841	5.00E-05	0.000851213	yes
TJP2	chr9:71736179-71870124	TTD7PVmother_uv	TTD7PV_uv	OK	1.64032	3.45307	1.0739	2.46542	5.00E-05	0.000851213	yes
TK1	chr17:76170159-76183285	TTD7PVmother_uv	TTD7PV_uv	OK	24.2224	54.3861	1.16689	4.33076	5.00E-05	0.000851213	yes
TLR4	chr9:120466452-120479769	TTD7PVmother_uv	TTD7PV_uv	OK	1.28898	0.196635	-2.71264	-4.7899	5.00E-05	0.000851213	yes
TM4SF1	chr3:149086804-149095568	TTD7PVmother_uv	TTD7PV_uv	OK	16.4784	2.75044	-2.58284	-7.52549	5.00E-05	0.000851213	yes
TMEM155	chr4:122680084-122687963	TTD7PVmother_uv	TTD7PV_uv	OK	3.16926	7.5139	1.24542	3.30385	5.00E-05	0.000851213	yes
TMEM229B	chr14:67936982-67982021	TTD7PVmother_uv	TTD7PV_uv	OK	0.579915	0.216362	-1.42239	-2.30176	0.0013	0.0132326	yes
TMEM255B	chr13:114462215-114514899	TTD7PVmother_uv	TTD7PV_uv	OK	9.49521	2.17111	-2.12877	-5.41087	5.00E-05	0.000851213	yes
TMEM59L	chr19:18723681-18731849	TTD7PVmother_uv	TTD7PV_uv	OK	3.66084	0.612604	-2.57915	-4.82812	5.00E-05	0.000851213	yes
TMEM9B-AS1	chr11:8986221-8997830	TTD7PVmother_uv	TTD7PV_uv	OK	1.6279	3.54368	1.12223	2.53084	0.0017	0.0164429	yes
TMTC1	chr12:29653745-29937692	TTD7PVmother_uv	TTD7PV_uv	OK	12.8491	4.40223	-1.54536	-4.48524	5.00E-05	0.000851213	yes
TNFAIP6	chr2:152214105-152236562	TTD7PVmother_uv	TTD7PV_uv	OK	6.93819	19.2101	1.46923	3.74679	5.00E-05	0.000851213	yes
TNFRSF10C	chr8:22941867-22974950	TTD7PVmother_uv	TTD7PV_uv	OK	2.00844	5.3491	1.41322	2.51403	0.00025	0.00340302	yes
TNFRSF14	chr1:2487207-2495267	TTD7PVmother_uv	TTD7PV_uv	OK	8.08615	3.01	-1.42569	-3.13123	5.00E-05	0.000851213	yes
TNFRSF1B	chr1:12227059-12269277	TTD7PVmother_uv	TTD7PV_uv	OK	0.801404	0.373261	-1.10235	-1.74463	0.00185	0.0176238	yes
TNFRSF21	chr6:47199267-47277680	TTD7PVmother_uv	TTD7PV_uv	OK	8.95711	2.93264	-1.61083	-4.85876	5.00E-05	0.000851213	yes
TNFSF4	chr1:173152869-173176471	TTD7PVmother_uv	TTD7PV_uv	OK	1.02855	0.309998	-1.73029	-3.16317	0.0001	0.00155758	yes
TOX	chr8:59717976-60031767	TTD7PVmother_uv	TTD7PV_uv	OK	0.0871603	2.30388	4.72425	6.76458	5.00E-05	0.000851213	yes
TP53I11	chr11:44785975-44972857	TTD7PVmother_uv	TTD7PV_uv	OK	15.5976	6.28546	-1.31123	-2.09945	0.0003	0.00396402	yes
TPD52	chr8:80947104-81083836	TTD7PVmother_uv	TTD7PV_uv	OK	0.0479056	1.12175	4.54941	4.21556	5.00E-05	0.000851213	yes
TPTEP1	chr22:17082800-17129720	TTD7PVmother_uv	TTD7PV_uv	OK	2.62332	0.095366	-4.78178	-5.04808	0.0019	0.0180051	yes
TRAM1L1	chr4:118004709-118006736	TTD7PVmother_uv	TTD7PV_uv	OK	0.824649	1.78112	1.11093	2.28547	0.0014	0.0141027	yes
TRH	chr3:129693113-129696779	TTD7PVmother_uv	TTD7PV_uv	OK	0.601837	0.220847	-1.44633	-1.95358	0.0059	0.0439957	yes
TRIB2	chr2:12856997-12882858	TTD7PVmother_uv	TTD7PV_uv	OK	3.19473	1.59685	-1.00046	-2.51324	5.00E-05	0.000851213	yes
TRIM47	chr17:73870244-73874656	TTD7PVmother_uv	TTD7PV_uv	OK	6.30672	2.69884	-1.22455	-3.13248	5.00E-05	0.000851213	yes
TRPC3	chr4:122800182-122872909	TTD7PVmother_uv	TTD7PV_uv	OK	0.125397	0.529149	2.07717	2.68301	0.0002	0.00284504	yes
TRPV2	chr17:16318855-16340317	TTD7PVmother_uv	TTD7PV_uv	OK	6.00278	0.618205	-3.27947	-6.99936	5.00E-05	0.000851213	yes
TSPAN10	chr17:79609348-79615779	TTD7PVmother_uv	TTD7PV_uv	OK	3.74042	1.66032	-1.17173	-2.67665	0.0003	0.00396402	yes
TSPAN13	chr7:16793350-16824161	TTD7PVmother_uv	TTD7PV_uv	OK	6.51739	2.08158	-1.64662	-4.40554	5.00E-05	0.000851213	yes

TSPAN2	chr1:115590632-115632121	TTD7PVmother_uv	TTD7PV_uv	OK	1.07229	0.394151	-1.44388	-2.65257	0.00055	0.00656053	yes
TSPAN8	chr12:71518876-71551779	TTD7PVmother_uv	TTD7PV_uv	OK	0.235127	2.58373	3.45794	5.21399	0.00015	0.00220839	yes
TTC12	chr11:113185250-113237114	TTD7PVmother_uv	TTD7PV_uv	OK	0.280189	2.24968	3.00525	4.80616	5.00E-05	0.000851213	yes
TUBE1	chr6:112391859-112423993	TTD7PVmother_uv	TTD7PV_uv	OK	4.68635	9.97822	1.09032	2.65284	0.0001	0.00155758	yes
TXNIP	chr1:145438461-145442628	TTD7PVmother_uv	TTD7PV_uv	OK	29.3299	14.1969	-1.04679	-3.56551	5.00E-05	0.000851213	yes
TYW1B	chr7:72023728-72298813	TTD7PVmother_uv	TTD7PV_uv	OK	0.243853	0.863382	1.82399	2.51951	5.00E-05	0.000851213	yes
UCHL1	chr4:41258897-41270446	TTD7PVmother_uv	TTD7PV_uv	OK	187.187	453.132	1.27545	4.96454	5.00E-05	0.000851213	yes
ULBP1	chr6:150285142-150294846	TTD7PVmother_uv	TTD7PV_uv	OK	4.24618	12.4271	1.54925	4.28561	5.00E-05	0.000851213	yes
USP32P1	chr17:16690205-16707819	TTD7PVmother_uv	TTD7PV_uv	OK	0.232618	0.587423	1.33644	2.19379	0.00125	0.012827	yes
USP53	chr4:120133781-120216673	TTD7PVmother_uv	TTD7PV_uv	OK	12.7879	5.818	-1.13619	-3.79589	5.00E-05	0.000851213	yes
VAX2	chr2:71127719-71160575	TTD7PVmother_uv	TTD7PV_uv	OK	1.29057	0.432335	-1.57778	-2.47508	0.00235	0.0214025	yes
VIT	chr2:36923832-37041937	TTD7PVmother_uv	TTD7PV_uv	OK	5.38592	0.614685	-3.13127	-5.21107	5.00E-05	0.000851213	yes
WARS	chr14:100800124-100842680	TTD7PVmother_uv	TTD7PV_uv	OK	84.3934	181.118	1.10173	3.02216	5.00E-05	0.000851213	yes
WISP1	chr8:134203281-134243932	TTD7PVmother_uv	TTD7PV_uv	OK	16.0917	33.6221	1.06309	3.25091	5.00E-05	0.000851213	yes
WISP2	chr20:43343884-43356452	TTD7PVmother_uv	TTD7PV_uv	OK	342.622	24.8015	-3.78812	-12.3148	5.00E-05	0.000851213	yes
WNK4	chr17:40932648-40949084	TTD7PVmother_uv	TTD7PV_uv	OK	3.52072	0.371605	-3.24403	-5.62613	5.00E-05	0.000851213	yes
WNT4	chr1:22443797-22469519	TTD7PVmother_uv	TTD7PV_uv	OK	1.75558	0.351435	-2.32062	-4.12563	5.00E-05	0.000851213	yes
WNT5B	chr12:1726221-1756378	TTD7PVmother_uv	TTD7PV_uv	OK	59.5437	20.0705	-1.56887	-4.7728	5.00E-05	0.000851213	yes
XG	chrX:2670092-2734541	TTD7PVmother_uv	TTD7PV_uv	OK	23.8368	9.7839	-1.28471	-4.4833	5.00E-05	0.000851213	yes
XPNPEP2	chrX:128872945-128903525	TTD7PVmother_uv	TTD7PV_uv	OK	1.80795	9.31901	2.36583	5.98715	5.00E-05	0.000851213	yes
ZFPM2	chr8:106331146-106816767	TTD7PVmother_uv	TTD7PV_uv	OK	2.82198	0.335572	-3.07201	-5.93202	5.00E-05	0.000851213	yes
ZIC1	chr3:147127180-147134506	TTD7PVmother_uv	TTD7PV_uv	OK	0.0248948	1.62526	6.02868	5.53306	0.0026	0.0231127	yes
ZIC4	chr3:147103834-147124596	TTD7PVmother_uv	TTD7PV_uv	OK	0.044573	1.19038	4.7391	3.261	5.00E-05	0.000851213	yes
ZKSCAN4	chr6:28212489-28220002	TTD7PVmother_uv	TTD7PV_uv	OK	0.92999	0.428688	-1.11729	-1.85501	0.00385	0.03158	yes
ZNF391	chr6:27356523-27369227	TTD7PVmother_uv	TTD7PV_uv	OK	0.899711	0.310847	-1.53326	-2.34744	0.00235	0.0214025	yes
ZNF613	chr19:52430687-52449011	TTD7PVmother_uv	TTD7PV_uv	OK	0.615856	0.249372	-1.30429	-1.66945	0.0032	0.0272756	yes
ZNF702P	chr19:53471503-53496784	TTD7PVmother_uv	TTD7PV_uv	OK	0.821376	0.132092	-2.6365	-3.7365	5.00E-05	0.000851213	yes
ZNF711	chrX:84498996-84528368	TTD7PVmother_uv	TTD7PV_uv	OK	0.292279	0.704023	1.26828	2.06412	0.0009	0.0098346	yes
ZNF804A	chr2:185463092-185804214	TTD7PVmother_uv	TTD7PV_uv	OK	0.109194	0.689756	2.65919	3.90123	5.00E-05	0.000851213	yes

Table S6. List of the 174 deregulated genes and the 3 reference genes analyzed by RealTime Ready Custom Panels in the RNA pools from primary dermal fibroblasts of 4 TTD/XP-D patients (TTD pool) and 4 healthy TTD parents (control pool).

Gene Symbol	Gene Description	Source: HGNC Symbol; Acc
ACOT1	acyl-CoA thioesterase 1	41
ADM	myeloid-associated differentiation marker	359
ADRA2A	adrenergic, alpha-2A- receptor	281
AHR	aryl hydrocarbon receptor	348
AKAP2	A kinase (PRKA) anchor protein 2	372
AKR1C2	aldo-keto reductase family 1, member C2 (dihydrodiol dehydrogenase 2	385
ALDH1A3	aldehyde dehydrogenase 1 family, member A3	409
ALDH1B1	aldehyde dehydrogenase 1 family, member B1	407
ALDH3B1	aldehyde dehydrogenase 3 family, member B1	410
ANGPTL4	angiopoietin-like 4	16039
ANP32A	acidic (leucine-rich) nuclear phosphoprotein 32 family, member A	13233
ANTXR1	anthrax toxin receptor 1	21014
AP1S2	adaptor-related protein complex 1, sigma 2 subunit	560
APBB1IP	amyloid beta (A4) precursor protein-binding, family B, member 1 interacting protein	17379
ARHGAP23	Rho GTPase activating protein 23	29293
ASS1	argininosuccinate synthase 1	758
ATF5	activating transcription factor 5	790
ATP13A3	ATPase type 13A3	24113
C15orf39	Uncharacterized protein C15orf39	-
C1orf198	Uncharacterized protein C1orf198	-
C8orf58	Uncharacterized protein C8orf58	-
CABLES1	Cdk5 and Abl enzyme substrate 1	25097
CAMK2N1	calcium/calmodulin-dependent protein kinase II inhibitor 1	24190
CCDC8	coiled-coil domain containing 8	25367
CCRL1	chemokine (C-C motif) receptor-like 1	1611
CLEC3B	C-type lectin domain family 3, member B	11891
CLGN	calmegin	2060
CLIC3	chloride intracellular channel 3	2064
CLU	clusterin	2095
CNN1	calponin 1, basic, smooth muscle	2155
COL4A1	collagen, type IV, alpha 1	2202
CRABP2	cellular retinoic acid binding protein 2	2339
CRLF1	cytokine receptor-like factor 1	2364
CRYAB	crystallin, alpha B	2389
CRYZ	crystallin, zeta (quinone reductase)	2419
CSRP2	cysteine and glycine-rich protein 2	2470
CTGF	connective tissue growth factor	2500
CTSC	cathepsin C	2528
CTSK	cathepsin K	2536
CYR61	cysteine-rich, angiogenic inducer, 61	2654
DCAF4	DDB1 and CUL4 associated factor 4	20229
DDIT3	DNA-damage-inducible transcript 3	2726
DDIT4	DNA-damage-inducible transcript 4	24944
DNAJB1	DnaJ (Hsp40) homolog, subfamily B, member 1	5270
DPP4	dipeptidyl-peptidase 4	3009
DSP	desmoplakin	3052
DUSP1	dual specificity phosphatase 1	3064
EGR1	early growth response 1	3238
EIF4EBP1	eukaryotic translation initiation factor 4E binding protein 1	3288
EPDR1	ependymin related protein 1	17572
EPS8L2	EPS8-like 2	21296
F2R	coagulation factor II (thrombin) receptor	3537
FAM118A	family with sequence similarity 118, member A	1313
FAM43A	family with sequence similarity 43, member A	26888

Gene Symbol	Gene Description	Source: HGNC Symbol; Acc
FBXO32	F-box protein 32	16731
FGF7	fibroblast growth factor 7	3685
FNDC4	fibronectin type III domain containing 4	20239
FOSB	FBJ murine osteosarcoma viral oncogene homolog B	3797
FOXO3	forkhead box O3	3821
GADD45A	growth arrest and DNA-damage-inducible, alpha	4095
GADD45B	growth arrest and DNA-damage-inducible, beta	4096
GALNTL2	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase-like 2	21531
GAS1	growth arrest-specific 1	4165
GAS5	small nucleolar RNA, C/D box 44	10183
GAS6	growth arrest-specific 6	4168
GDF15	growth differentiation factor 15	30142
GDF6	growth differentiation factor 6	4221
GLRX	glutaredoxin (thioltransferase)	4330
GNG11	guanine nucleotide binding protein (G protein), gamma 11	4403
GYPC	glycophorin C (Gerbich blood group)	4704
HAND2	heart and neural crest derivatives expressed 2	4808
HAPLN3	hyaluronan and proteoglycan link protein 3	21446
HERPUD1	homocysteine-inducible, endoplasmic reticulum stress-inducible, ubiquitin-like domain member 1	13744
HIST2H2BE	histone cluster 2, H2be	4760
HMOX1	heme oxygenase (decycling) 1	5013
HNRNPA1	heterogeneous nuclear ribonucleoprotein A1	5031
HOXB7	homeobox B7	5118
HOXC10	homeobox C10	5122
HOXC9	homeobox C9	5130
HSD3B7	hydroxy-delta-5-steroid dehydrogenase, 3 beta- and steroid delta-isomerase 7	18324
HSPA2	heat shock 70kDa protein 2	5235
HSPB7	heat shock 27kDa protein family, member 7	5249
ID1	inhibitor of DNA binding 1, dominant negative helix-loop-helix protein	5360
ID3	inhibitor of DNA binding 3, dominant negative helix-loop-helix protein	5362
IER3	Radiation-inducible immediate-early gene IEX-1 (Immediate early protein GLY96)(Immediate early response 3 protein)	P46695
IGFBP4	insulin-like growth factor binding protein 4	5473
IL13RA2	interleukin 13 receptor, alpha 2	5975
IL20RB	interleukin 20 receptor beta	6004
IL6	interleukin 6 (interferon, beta 2)	6018
IRF2BP2	interferon regulatory factor 2 binding protein 2	21729
IRS2	insulin receptor substrate 2	6126
JUN	jun proto-oncogene	6204
JUND	jun D proto-oncogene	6206
KCNE4	potassium voltage-gated channel, Isk-related family, member 4	6244
KRT34	keratin 34	6452
KRTAP1-5	keratin associated protein 1-5	16777
LBH	limb bud and heart development homolog (mouse)	29532
LDOC1	leucine zipper, down-regulated in cancer 1	6548
LGALS3BP	lectin, galactoside-binding, soluble, 3 binding protein	6564
LGR4	leucine-rich repeat-containing G protein-coupled receptor 4	13299
LIF	leukemia inhibitory factor (cholinergic differentiation factor)	6596
LMCD1	LIM and cysteine-rich domains 1	6633
LMO7	LIM domain 7	6646
LRRC15	leucine rich repeat containing 15	20818
MFAP5	microfibrillar associated protein 5	29673
MIDN	midnolin	16298
MMP1	matrix metallopeptidase 1 (interstitial collagenase)	7155
MMS19	MMS19 nucleotide excision repair homolog (S. cerevisiae)	13824
MOXD1	monooxygenase, DBH-like 1	21063

Gene Symbol	Gene Description	Source: HGNC Symbol; Acc
MT1E	metallothionein 1L (gene/pseudogene)	7404
MT2A	metallothionein 2A	7406
MUC1	mucin 1, cell surface associated	7508
MYADM	myeloid-associated differentiation marker	7544
MYC	v-myc myelocytomatosis viral oncogene homolog (avian)	7553
MYL9	myosin, light chain 9, regulatory	15754
MYLK	myosin light chain kinase	7590
NBL1	neuroblastoma, suppression of tumorigenicity 1	7650
NQO1	NAD(P)H dehydrogenase, quinone 1	2874
PAM	peptidylglycine alpha-amidating monooxygenase	8596
PCDH10	protocadherin 10	13404
PHGDH	phosphoglycerate dehydrogenase	8923
PIK3IP1	phosphoinositide-3-kinase interacting protein 1	24942
PLEKHO2	pleckstrin homology domain containing, family O member 2	30026
PLXNB1	plexin B1	9103
PMP22	peripheral myelin protein 22	9118
POSTN	periostin, osteoblast specific factor	16953
PPP1R3C	protein phosphatase 1, regulatory (inhibitor) subunit 3C	9293
PRSS23	Serine protease 23 Precursor (EC 3.4.21.-)(Putative secreted protein Zsig13)	560
PSG1	pregnancy specific beta-1-glycoprotein 1	9514
PSG4	pregnancy specific beta-1-glycoprotein 4	9521
PTGES	prostaglandin E synthase	9599
PTGIS	prostaglandin I2 (prostacyclin) synthase	9603
PTGS1	prostaglandin-endoperoxide synthase 1 (prostaglandin G/H synthase and cyclooxygenase)	9604
QPCT	glutaminyl-peptide cyclotransferase	9753
RAB3B	RAB3B, member RAS oncogene family	9778
RPL22L1	ribosomal protein L22-like 1	27610
RPL36A	ribosomal protein L36a	135255
RPS21	ribosomal protein S21	10409
RPS3	ribosomal protein S3	10420
RSPO3	R-spondin 3 homolog (Xenopus laevis)	20866
SERINC2	serine incorporator 2	23231
SERPINH1	serpin peptidase inhibitor, clade H (heat shock protein 47), member 1, (collagen binding protein 1)	1546
SFRP4	secreted frizzled-related protein 4	10778
SGK1	serum/glucocorticoid regulated kinase 1	10810
SH3BGR	SH3 domain binding glutamic acid-rich protein	10822
SLC16A3	solute carrier family 16, member 3 (monocarboxylic acid transporter 4)	10924
SLC2A1	solute carrier family 2 (facilitated glucose transporter), member 1	11005
SMAD7	SMAD family member 7	6773
SOCS1	suppressor of cytokine signaling 1	19383
SPON2	spondin 2, extracellular matrix protein	11253
STBD1	starch binding domain 1	24854
STC2	stanniocalcin 2	11374
STMN2	stathmin-like 2	10577
SYNPO2	synaptopodin 2	17732
TBX1	T-box 1	11592
TFPI2	"tissue factor pathway inhibitor 2	11761
TGM2	transglutaminase 2 (C polypeptide, protein-glutamine-gamma-glutamyltransferase)	11778
THBS1	thrombospondin 1	11785
THBS2	thrombospondin 2	11786
TM4SF1	transmembrane 4 L six family member 1	11853
TNFRSF12A	tumor necrosis factor receptor superfamily, member 12A	18152
TOB1	transducer of ERBB2, 1	11979
TSC22D3	TSC22 domain family, member 3	3051
UCHL1	ubiquitin carboxyl-terminal esterase L1 (ubiquitin thiolesterase)	12513

Gene Symbol	Gene Description	Source: HGNC Symbol; Acc
WISP2	WNT1 inducible signaling pathway protein 2	12770
WNT5B	wingless-type MMTV integration site family, member 5B	16265
XG	Xg pseudogene, Y-linked 2	34022
ZNF503	zinc finger protein 503	23589
REFERENCE	GENES	
G6PD	glucose-6-phosphate dehydrogenase	4057
GAPDH	glyceraldehyde-3-phosphate dehydrogenase	4141
YWHAZ	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide	12855

Table S7. Clinical, cellular and molecular features of the 26 patients analyzed in this study.

Patient Code	disease	Clinical severity[b]	Sex	Mutated gene	Mutated alleles	UDS[c]	TFIIH level[d]	Refs[e]
TTD1RO	PS-TTD	Severe	F	ERCC2/XPD	p.[Arg658Cys];[Gly713Arg]	45	35	20
TTD6VI	PS-TTD	Mild	M	ERCC3/XPB	p.[Thr119Pro];[Thr119Pro]	40	42	3,4
TTD7PV	PS-TTD	Severe	F	ERCC2/XPD	p.[Leu461Val;Val716_Arg730del];[Arg722Trp]	15	56	1,2,6,8
TTD8PV	PS-TTD	Moderate	M	ERCC2/XPD	p.[Arg112His];[Arg112His]	10	34	1,2,3,4-6,8
TTD11PV	PS-TTD	Severe	M	ERCC2/XPD	p.[Arg112His];[Val121_Glu159del]	10	43	2,3,8
TTD12PV[a]	PS-TTD	Severe	M	ERCC2/XPD	p.[Cys259Tyr];[Arg722Trp]	20	65	2,3,8
TTD13PV	PS-TTD	Mild	M	GTF2H5/TTDA	p.[Met1Thr];[Met1Thr]	10	30	13,14
TTD14PV	PS-TTD	Moderate	M	GTF2H5/TTDA	p.[Met1Thr];[Met1Thr]	15	30	13,14
TTD15PV[a]	PS-TTD	Severe	M	ERCC2/XPD	p.[Cys259Tyr];[Arg722Trp]	20	60	2,8
TTD20PV	PS-TTD	Severe	F	ERCC2/XPD	p.[Arg112His];[Leu461Val;Val716_Arg730del]	10	46	8
TTD22PV	PS-TTD	Moderate	M	ERRC2/XPD	p.[Gln662*];[Glu731Val-fs*100;Glu731_Gly735delins42;Glu731Glyfs*50]	30	60	8,18
TTD23PV	PS-TTD	Severe	F	ERCC2/XPD	p.[0];[Arg112His]	7	36	7,8
TTD24PV	PS-TTD	Moderate	M	ERCC2/XPD	p.[Glu317Aspfs*110, =];[Arg722Trp]	40	55	18
TTD35PV	PS-TTD	Moderate	M	ERCC2/XPD	na	47	56	This study
TTD1BR	PS-TTD	Moderate	M	GTF2H5/TTDA	p.[Leu21Pro];[Arg56*]	25	30	3,4,12,13
TTD16PV	NPS-TTD	Severe	F	MPLKIP/TTDN1	p.[His50Alafs*8];[His50Alafs*8]	101	112	15,16
TTD18PV	NPS-TTD	No info	F	TARS1	p.[Lys276Glu];[Arg638*]	105	108	19
TTD28PV	PS-TTD	Moderate	F	GTF2E2	p.[Asp187Tyr];[Asp187Tyr]	95	108	17
TTD31PV	NPS-TTD	Moderate	F	MPLKIP/TTDN1	p.[His50Alafs*8];[Ser93Profs*60]	113	120	15,16
TTD379BE	NPS-TTD	Moderate	M	GTF2E2	p.[Ala150Pro];[Ala150Pro]	na	92	17,4
85RD251	NPS-TTD	Mild	F	CARS1	p.[Arg341His];[Gln380*]	100	/	21
XP1BR	XP	Severe	/	ERCC2/XPD	p.[Arg683Trp];[Arg683Trp]	30	83	9

XP15PV[a]	XP	Moderate	F	*ERCC2/XPD*	p.[Arg683Gln];[Arg683Gln]	26	na	8,9
XP16PV[a]	XP	Moderate	F	*ERCC2/XPD*	p.[Arg683Gln];[Arg683Gln]	25	108	3,8,9
XP17PV	XP	Mild	M	*ERCC2/XPD*	p.[Arg616Pro]; [Arg683Trp]	10	59	3,8,10,11
XP49BR	XP	Severe	M	*ERCC2/XPD*	p.[Leu461Val;Val716_Arg730del] ;[Arg683Trp]	15	83	8

Abbreviations. PS-TTD: photosensitive form of trichothiodystrophy; NPS-TTD: non-photosensitive form of trichothiodystrophy; XP: xeroderma pigmentosum; F: female; M: male; na: not analysed.

[a]TTD12PV and TTD15PV: brothers; XP15PV and XP16PV: sisters.

[b]Clinical severity in TTD refers to the degree of physical and mental impairment. For XP, it refers to the type and severity of skin lesions. See the quoted references for clinical details.

[c]UV-induced DNA repair synthesis (UDS) after irradiation with 10 J/m^2 observed in patient cells is expressed as percentage of that in normal cells analysed in parallel.

[d]TFIIH levels measured by immunoblot analysis are expressed as percentage of that in normal cells analysed in parallel.

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Table S8. Expression levels of the 174 deregulated genes in TTD-pool vs Control-pool in basal condition, analyzed by RealTime Ready Custom Panels

Gene Symbol	Source: HGNC Symbol; Acc	TTD patients nt		Control nt		Fold Change[b]
		C_t Mean±SD	ΔC_t[a]	C_t Mean±SD	ΔC_t[a]	
ACOT1	41	29.88±0.05	4.45	28.53±1.01	4.30	-1.110
ADM	359	28.41±0.21	3.17	27.50±1.18	3.47	1.233
ADRA2A	281	26.75±0.21	1.32	26.64±0.20	2.42	2.139
AHR	348	27.69±0.02	2.45	26.13±0.86	2.09	-1.279
AKAP2	372	25.42±0.18	0.18	23.97±0.79	-0.07	-1.186
AKR1C2	385	27.14±0.02	1.90	25.28±1.17	1.25	-1.567
ALDH1A3	409	27.12±0.06	1.70	25.95±1.00	1.73	1.022
ALDH1B1	407	30.16±0.21	4.73	28.49±1.15	4.26	-1.382
ALDH3B1	410	29.72±0.08	4.29	28.44±1.03	4.21	-1.055
ANGPTL4	16039	29.86±0.10	4.62	28.76±0.96	4.73	1.077
ANP32A	13233	27.77±0.08	2.53	26.45±0.98	2.41	-1.087
ANTXR1	21014	26.20±0.04	0.96	24.90±1.01	0.87	-1.067
AP000654.2	-	27.55±0.08	2.31	25.84±0.86	1.81	-1.417
AP1S2	560	26.13±0.33	0.71	25.62±0.18	1.39	1.608
APBB1IP	17379	33.36±0.22	7.93	30.70±1.03	6.47	-2.745
ARHGAP23	29293	28.98±0.11	3.74	28.58±0.74	4.55	1.755
ASS1	758	26.83±0.09	1.40	25.81±1.09	1.58	1.133
ATF5	790	28.68±0.03	3.26	26.58±1.20	2.36	-1.864
ATP13A3	24113	27.41±0.14	1.99	25.44±1.10	1.21	-1.707
C14orf4	-	30.98±0.01	5.74	29.03±1.23	4.99	-1.672
C15orf39	-	30.41±0.36	5.17	28.80±0.68	4.76	-1.321
C1orf198	-	26.68±0.05	1.25	25.33±1.29	1.10	-1.110
C4orf49	-	28.14±0.11	2.72	27.73±0.13	3.51	1.731
C8orf58	-	29.36±0.30	4.12	27.86±0.75	3.82	-1.228
CABLES1	25097	32.62±0.00	7.38	31.31±1.14	7.28	-1.074
CAMK2N1	24190	33.25±0.32	7.82	32.33±0.54	8.10	1.214
CCDC8	25367	28.17±0.52	2.93	27.06±0.57	3.03	1.073
CCRL1	1611	24.68±0.15	-0.57	24.66±0.51	0.62	2.274
CLEC3B	11891	29.26±0.11	3.83	28.53±1.25	4.31	1.392
CLGN	2060	29.54±0.25	4.12	30.04±0.23	5.82	3.253
CLIC3	2064	34.99±0.33	9.57	32.91±1.64	8.68	-1.847
CLU	2095	25.18±0.03	-0.24	22.53±1.19	-1.70	-2.742
CNN1	2155	29.51±0.21	4.27	28.55±1.32	4.51	1.184
COL4A1	2202	30.06±0.13	4.64	28.94±0.88	4.72	1.058
CRABP2	2339	25.01±0.06	-0.41	24.48±1.16	0.26	1.593
CRLF1	2364	28.85±0.11	3.42	27.17±1.27	2.94	-1.392
CRYAB	2389	30.34±0.86	4.92	30.08±0.55	5.85	1.912
CRYZ	2419	31.75±0.14	6.33	30.63±0.54	6.40	1.056
CSRP2	2470	28.53±0.14	3.11	25.60±0.61	1.37	-3.321
CTGF	2500	24.69±0.49	-0.56	22.58±0.68	-1.46	-1.873
CTSC	2528	27.58±0.07	2.34	26.65±0.90	2.61	1.209
CTSK	2536	23.87±0.10	-1.37	22.24±0.99	-1.80	-1.344
CYR61	2654	22.82±0.16	-2.42	21.19±1.04	-2.85	-1.347
DCAF4	20229	30.91±0.05	5.67	29.15±1.33	5.11	-1.469
DDIT3	2726	28.68±0.21	3.44	26.65±0.58	2.61	-1.774

DDIT4	24944	29.36±0.06	4.12	28.07±0.91	4.03	-1.058
DNAJB1	5270	29.89±0.11	4.65	28.70±1.05	4.66	1.009
DPP4	3009	27.24±0.28	1.81	25.19±1.01	0.96	-1.803
DSP	3052	27.92±0.13	2.50	25.96±0.84	1.73	-1.695
DUSP1	3064	24.80±0.00	-0.44	23.48±1.08	-0.56	-1.084
EGR1	3238	26.12±0.03	0.88	24.88±0.92	0.84	-1.028
EIF4EBP1	3288	27.24±0.08	2.00	24.92±1.02	0.89	-2.163
EPDR1	17572	28.43±0.18	3.00	26.76±1.00	2.53	-1.385
EPS8L2	21296	30.89±0.29	5.65	30.06±0.87	6.02	1.297
F2R	3537	29.15±0.12	3.72	27.15±1.14	2.92	-1.741
FAM118A	1313	30.98±0.13	5.74	29.76±0.82	5.73	-1.009
FAM43A	26888	24.57±0.16	-0.67	24.32±0.47	0.28	1.936
FBXO32	16731	30.25±0.04	5.01	28.20±0.95	4.16	-1.798
FGF7	3685	23.41±0.11	-2.02	22.38±0.39	-1.85	1.121
FNDC4	20239	29.90±0.02	4.47	28.56±1.28	4.34	-1.097
FOSB	3797	29.26±0.09	4.02	28.95±0.70	4.91	1.860
FOXO3	3821	32.68±0.06	7.44	31.50±1.25	7.46	1.020
GADD45A	4095	30.08±0.49	4.84	28.10±0.93	4.06	-1.707
GADD45B	4096	33.06±0.57	7.82	31.53±1.31	7.50	-1.251
GALNTL2	21531	30.15±0.05	4.72	27.82±0.98	3.59	-2.184
GAS1	4165	28.58±0.07	3.34	27.02±1.04	2.98	-1.280
GAS5	10183	33.98±0.04	8.56	32.24±0.70	8.02	-1.452
GAS6	4168	25.66±0.10	0.24	24.24±1.34	0.01	-1.166
GDF15	30142	36.48±0.31	11.24	34.02±1.21	9.98	-2.395
GDF6	4221	35.58±0.21	10.34	30.88±0.85	6.84	-11.249
GLRX	4330	25.87±0.24	0.63	25.16±0.31	1.13	1.411
GNG11	4403	33.13±0.03	7.71	33.59±0.13	9.36	3.157
GPX3	4555	37.69±0.29	12.26	34.66±1.34	10.43	-3.555
GYPC	4704	29.55±0.01	4.13	27.79±1.01	3.57	-1.473
HAND2	4808	30.93±0.04	5.50	28.15±1.05	3.93	-2.976
HAPLN3	21446	31.15±0.15	5.72	28.67±1.19	4.44	-2.428
HERPUD1	13744	31.69±0.34	6.45	28.03±0.87	3.99	-5.489
HIST2H2BE	4760	27.58±0.11	2.34	26.45±0.79	2.41	1.056
HMOX1	5013	26.22±0.04	0.98	24.43±1.27	0.40	-1.498
HNRNPA1	5031	29.25±0.49	4.01	27.86±0.43	3.82	-1.137
HOXB7	5118	36.54±0.66	11.30	33.62±1.11	9.58	-3.294
HOXC10	5122	28.82±0.01	3.40	28.68±1.20	4.45	2.078
HOXC9	5130	31.02±0.07	5.60	29.84±1.08	5.61	1.010
HSD3B7	18324	28.46±0.12	3.03	26.84±0.80	2.61	-1.338
HSPA2	5235	26.42±0.14	1.18	26.71±0.43	2.67	2.809
HSPB7	5249	26.80±0.19	1.37	25.49±0.94	1.27	-1.074
ID1	5360	21.63±0.14	-3.61	21.12±0.11	-2.91	1.621
ID3	5362	24.79±0.05	-0.46	23.38±1.12	-0.65	-1.147
IER3	5392	24.90±0.02	-0.35	22.80±1.07	-1.23	-1.851
IGFBP4	5473	26.16±0.11	0.73	25.11±0.46	0.88	1.110
IL13RA2	5975	25.83±0.14	0.41	26.26±0.30	2.04	3.099
IL20RB	6004	32.02±0.16	6.60	27.78±1.10	3.55	-8.234
IL6	6018	29.44±0.23	4.20	27.53±0.77	3.49	-1.636
IRF2BP2	21729	27.24±0.01	2.00	26.27±1.01	2.23	1.176
IRS2	6126	26.57±0.30	1.33	24.69±0.52	0.66	-1.595
JUN	6204	26.17±0.40	0.92	25.03±0.23	0.99	1.046

JUND	6206	31.63±0.06	6.39	31.08±0.60	7.04	1.569
KCNE4	6244	33.69±0.32	8.45	32.62±1.26	8.58	1.101
KRT34	6452	29.32±0.05	4.08	27.99±1.00	3.95	-1.091
KRTAP1-5	16777	27.86±0.16	2.44	26.86±1.17	2.63	1.145
LBH	29532	27.55±0.04	2.31	25.08±1.04	1.04	-2.398
LDOC1	6548	30.76±0.08	5.33	29.76±1.06	5.53	1.149
LGALS3BP	6564	29.55±0.06	4.12	27.65±1.22	3.43	-1.617
LGR4	13299	28.15±0.04	2.91	27.39±1.28	3.35	1.360
LIF	6596	27.56±0.11	2.32	25.88±0.79	1.85	-1.384
LMCD1	6633	25.86±0.13	0.62	24.32±1.15	0.28	-1.258
LMO7	6646	23.73±0.25	-1.70	22.30±0.57	-1.92	-1.171
LRRC15	20818	29.22±0.16	3.79	26.69±1.25	2.47	-2.502
LRRC32	4161	29.90±0.21	4.48	28.07±0.98	3.85	-1.546
MALAT1	29665	32.72±0.13	7.48	31.77±1.04	7.73	1.196
MALL	6818	27.45±0.10	2.03	26.72±1.36	2.49	1.380
MFAP5	29673	23.94±0.30	-1.31	22.56±0.48	-1.48	-1.126
MIDN	13824	27.44±0.16	2.20	25.99±0.95	1.96	-1.180
MMS19	16298	30.23±0.09	4.99	29.03±1.14	4.99	1.003
MOXD1	7155	26.11±0.08	0.68	25.06±1.02	0.83	1.110
MP1	21063	22.46±0.17	-2.97	22.51±0.55	-1.72	2.370
MT1E	7404	25.35±0.35	0.11	24.24±0.43	0.20	1.064
MT2A	7406	22.73±0.20	-2.51	21.00±0.82	-3.04	-1.441
MUC1	7508	29.53±0.03	4.29	28.16±1.13	4.13	-1.120
MYADM	7544	31.02±0.21	5.78	28.87±1.43	4.83	-1.927
MYC	7553	27.13±0.21	1.89	25.46±0.71	1.42	-1.380
MYL9	15754	23.14±0.03	-2.29	21.59±1.22	-2.63	-1.273
MYLK	7590	29.17±0.27	3.75	28.25±0.95	4.02	1.213
NBL1	7650	28.85±0.27	3.43	27.71±0.72	3.48	1.039
NQO1	2874	25.98±0.04	0.56	24.87±0.82	0.64	1.063
PAM	8596	24.05±0.36	-1.20	23.34±0.35	-0.70	1.409
PCDH10	13404	27.76±0.23	2.33	28.82±0.25	4.59	4.790
PHGDH	8923	29.40±0.27	3.98	27.36±1.41	3.14	-1.788
PIK3IP1	24942	29.31±0.12	3.88	28.80±1.21	4.58	1.621
PLEKHO2	30026	30.67±0.11	5.43	29.38±0.75	5.34	-1.061
PLXNB1	9103	28.24±0.16	2.81	26.91±0.82	2.69	-1.089
PMP22	9118	27.97±0.06	2.54	26.12±1.11	1.89	-1.569
POSTN	16953	28.07±0.08	2.64	25.52±1.05	1.29	-2.543
PPP1R3C	9293	28.08±0.19	2.84	27.14±1.17	3.11	1.207
PSG1	9514	26.41±0.01	0.98	27.29±0.19	3.06	4.238
PSG4	9521	26.94±0.15	1.51	25.10±0.17	0.88	-1.551
PTGES	9599	29.72±0.08	4.30	29.18±1.12	4.96	1.582
PTGIS	9603	29.02±0.17	3.60	25.79±1.15	1.56	-4.098
PTGS1	9604	29.34±0.21	3.91	26.75±1.21	2.52	-2.615
QPCT	9753	30.43±0.01	5.19	29.08±0.88	5.04	-1.107
RAB3B	9778	30.44±0.13	5.02	29.22±0.89	4.99	-1.017
RPL22L1	27610	33.28±0.10	7.86	31.26±0.17	7.04	-1.763
RPL36A	135255	19.96±0.00	-5.28	19.94±0.07	-4.09	2.276
RPS21	10409	20.89±0.19	-4.36	20.68±0.13	-3.36	1.998
RPS3	10420	22.66±0.06	-2.59	21.24±0.84	-2.80	-1.158
RSPO3	20866	27.29±0.06	2.05	26.30±0.83	2.26	1.163
SERINC2	23231	31.18±0.36	5.75	29.27±1.30	5.04	-1.636

SERPINH1	1546	24.78±0.01	-0.46	22.92±1.24	-1.12	-1.580
SFRP4	10778	30.10±0.10	4.68	27.68±0.55	3.45	-2.338
SGK1	10810	25.63±0.06	0.39	23.69±1.03	-0.34	-1.662
SH3BGR	10822	30.18±0.18	4.76	29.12±0.43	4.89	1.101
SLC16A3	10924	27.74±0.05	2.31	26.54±1.33	2.32	1.005
SLC2A1	11005	29.95±0.01	4.71	28.15±1.24	4.12	-1.509
SMAD7	6773	28.28±0.24	2.86	26.66±1.23	2.43	-1.343
SOCS1	19383	28.81±0.13	3.57	29.29±0.27	5.25	3.223
SPON2	11253	27.69±0.08	2.27	26.53±1.13	2.30	1.025
STBD1	24854	28.03±0.21	2.79	26.61±0.69	2.57	-1.165
STC2	11374	29.15±0.25	3.73	27.65±1.22	3.43	-1.230
STMN2	10577	25.68±0.30	0.26	23.08±0.61	-1.15	-2.642
SYNPO2	17732	33.46±0.16	8.03	32.53±1.00	8.30	1.206
TBX1	11592	34.70±0.57	9.28	31.17±0.92	6.95	-5.022
TFPI2	11761	24.14±0.25	-1.29	24.28±0.39	0.06	2.534
TGM2	11778	36.44±0.32	11.01	35.15±1.51	10.92	-1.062
THBS1	11785	20.77±0.16	-4.48	19.48±1.25	-4.56	-1.061
THBS2	11786	26.01±0.20	0.59	24.77±0.83	0.54	-1.032
TM4SF1	11853	25.57±0.08	0.15	27.42±0.21	3.19	8.253
TNFRSF12A	18152	25.62±0.01	0.38	24.29±0.93	0.25	-1.092
TOB1	11979	25.65±0.27	0.41	25.47±0.30	1.43	2.033
TSC22D3	3051	30.41±0.11	5.17	28.43±1.28	4.39	-1.717
UCHL1	12513	23.73±0.23	-1.51	23.48±0.38	-0.56	1.932
WISP2	12770	33.51±0.00	8.09	28.76±0.20	4.53	-11.726
WNT5B	16265	28.18±0.13	2.75	26.50±1.19	2.27	-1.392
XG	34022	27.53±0.06	2.11	26.16±0.43	1.93	-1.129
ZNF503	23589	25.52±0.11	0.10	24.76±0.25	0.53	1.355

Abbreviations. SD. standard deviation.

[a] the ΔC_t value was calculated as [C_t of the selected gene - C_t of the reference genes].

[b] the Fold Change in the TTD pool versus Control pool in basal condition was calculated as $2^{-(\Delta Ct\ patients\ -\ \Delta Ct\ controls)}$ by using the $2^{-\Delta\Delta Ct}$ method (Livak and Schmittgen. 2001). A Fold Change = 1 indicates no variation in the gene expression between the two pools. Fold Change values > +1 correspond to genes with increased expression in the TTD pool compared to Control pool whereas Fold Change values < -1 correspond to genes with lowered expression in the TTD pool compared to Control pool.

Table S9. Expression levels of the 174 deregulated genes in TTD vs Control pool upon UV irradiation, analyzed by RealTime Ready Custom Panels

Gene Symbol	Source: HGNC Symbol; Acc	TTD patients uv		Control uv		Fold Change[b]
		C_t Mean±SD	ΔC_t[a]	C_t Mean±SD	ΔC_t[a]	
HOXB7	5118	34.71±0.98	10.31	37.43±3.64	12.20	3.702
ACOT1	41	28.77±1.17	4.18	29.70±0.20	4.27	1.062
ADM	359	27.48±1.13	3.08	28.41±0.20	3.18	1.069
ADRA2A	281	26.34±0.18	1.75	27.06±0.21	1.63	-1.084
AHR	348	26.86±1.13	2.46	27.55±0.14	2.32	-1.104
AKAP2	372	24.85±0.95	0.45	25.32±0.33	0.08	-1.285
AKR1C2	385	25.74±1.17	1.34	26.68±0.14	1.45	1.077
ALDH1A3	409	26.47±1.10	1.88	27.28±0.08	1.85	-1.027
ALDH1B1	407	29.76±1.29	5.17	29.55±0.00	4.12	-2.066
ALDH3B1	410	28.61±1.25	4.02	29.38±0.14	3.95	-1.050
ANGPTL4	16039	30.83±1.06	6.43	30.10±0.06	4.87	-2.966
ANP32A	13233	26.69±1.09	2.29	27.58±0.24	2.35	1.040
ANTXR1	21014	25.31±1.11	0.91	25.85±0.09	0.62	-1.230
AP000654.2	-	26.36±1.16	1.96	27.23±0.17	2.00	1.028
AP1S2	560	25.82±0.11	1.23	26.13±0.31	0.70	-1.444
APBB1IP	17379	32.36±1.37	7.77	31.94±0.08	6.51	-2.389
ARHGAP23	29293	28.37±1.12	3.97	30.07±0.02	4.84	1.821
ASS1	758	25.82±1.24	1.23	27.33±0.16	1.90	1.582
ATF5	790	27.57±1.30	2.98	27.49±0.15	2.06	-1.899
ATP13A3	24113	27.38±1.33	2.79	27.67±0.14	2.24	-1.464
C14orf4	-	29.94±1.53	5.54	30.64±0.09	5.41	-1.096
C15orf39	-	30.43±0.76	6.03	30.33±0.54	5.10	-1.907
C1orf198	-	26.05±1.42	1.46	27.14±0.20	1.71	1.186
C4orf49	-	27.83±0.13	3.24	28.22±0.37	2.79	-1.368
C8orf58	-	29.08±0.84	4.68	29.20±0.05	3.97	-1.638
CABLES1	25097	31.84±1.26	7.44	32.94±0.01	7.71	1.199
CAMK2N1	24190	33.13±0.49	8.54	33.17±0.70	7.74	-1.747
CCDC8	25367	28.17±0.48	3.77	28.57±0.37	3.34	-1.350
CCRL1	1611	23.86±0.58	-0.54	25.51±0.34	0.28	1.761
CLEC3B	11891	28.14±1.32	3.55	29.64±0.23	4.21	1.578
CLGN	2060	29.30±0.33	4.71	30.56±0.35	5.13	1.338
CLIC3	2064	33.87±1.61	9.28	34.20±0.08	8.77	-1.421
CLU	2095	24.09±1.25	-0.50	23.83±0.21	-1.61	-2.151
CNN1	2155	28.55±1.25	4.15	29.35±0.16	4.12	-1.025
COL4A1	2202	29.84±1.16	5.25	30.21±0.13	4.78	-1.382
CRABP2	2339	23.85±1.20	-0.74	25.74±0.25	0.31	2.063
CRLF1	2364	28.03±1.52	3.44	28.34±0.32	2.91	-1.446
CRYAB	2389	30.21±0.36	5.62	30.79±0.33	5.36	-1.202
CRYZ	2419	30.87±0.74	6.28	31.75±0.61	6.32	1.030
CSRP2	2470	27.28±0.70	2.69	26.68±0.53	1.25	-2.729
CTGF	2500	24.72±0.83	0.32	23.77±0.14	-1.46	-3.434
CTSC	2528	26.50±0.99	2.10	27.70±0.38	2.47	1.289
CTSK	2536	22.72±1.09	-1.68	23.42±0.16	-1.82	-1.098
CYR61	2654	21.75±1.21	-2.65	21.64±0.13	-3.60	-1.930
DCAF4	20229	30.39±1.40	5.99	30.82±0.13	5.59	-1.320
DDIT3	2726	27.69±0.77	3.29	27.56±0.29	2.33	-1.948

DDIT4	24944	27.70±1.00	3.30	29.02±0.12	3.79	1.400
DNAJB1	5270	28.79±1.18	4.39	29.43±0.22	4.20	-1.147
DPP4	3009	26.21±1.26	1.62	26.45±0.17	1.02	-1.519
DSP	3052	27.43±1.25	2.84	27.77±0.13	2.34	-1.417
DUSP1	3064	23.56±1.27	-0.84	24.14±0.30	-1.10	-1.191
EGR1	3238	24.55±1.15	0.15	24.37±0.14	-0.86	-2.009
EIF4EBP1	3288	26.09±1.08	1.69	25.98±0.24	0.75	-1.919
EPDR1	17572	27.48±1.16	2.89	27.86±0.23	2.43	-1.384
EPS8L2	21296	29.93±1.15	5.53	30.66±0.11	5.43	-1.072
F2R	3537	28.21±1.42	3.62	28.63±0.19	3.20	-1.343
FAM118A	1313	30.58±0.85	6.18	31.03±0.01	5.80	-1.309
FAM43A	26888	24.72±0.43	0.32	24.76±0.24	-0.47	-1.725
FBXO32	16731	29.58±1.20	5.18	29.79±0.07	4.56	-1.540
FGF7	3685	23.48±0.54	-1.11	23.69±0.48	-1.74	-1.548
FNDC4	20239	28.71±1.47	4.12	29.82±0.28	4.39	1.206
FOSB	3797	28.25±1.06	3.85	28.88±0.05	3.65	-1.155
FOXO3	3821	32.68±1.42	8.28	33.53±0.11	8.30	1.010
GADD45A	4095	28.24±1.05	3.84	28.11±0.15	2.88	-1.957
GADD45B	4096	32.24±1.35	7.84	31.55±0.62	6.32	-2.868
GALNTL2	21531	29.21±1.17	4.62	29.06±0.33	3.63	-1.982
GAS1	4165	27.35±1.17	2.95	28.47±0.32	3.24	1.216
GAS5	10183	31.61±0.74	7.02	31.37±0.23	5.94	-2.114
GAS6	4168	24.65±1.49	0.06	25.50±0.18	0.07	1.006
GDF15	30142	33.95±1.26	9.55	34.16±0.12	8.93	-1.539
GDF6	4221	35.33±1.00	10.93	32.51±0.04	7.28	-12.568
GLRX	4330	25.39±0.32	0.99	25.72±0.20	0.49	-1.411
GNG11	4403	33.55±0.22	8.96	33.89±0.24	8.46	-1.417
GPX3	4555	36.61±1.58	12.02	35.95±0.00	10.52	-2.828
GYPC	4704	28.62±1.31	4.03	28.81±0.16	3.38	-1.573
HAND2	4808	29.92±1.04	5.33	29.48±0.47	4.05	-2.423
HAPLN3	21446	30.71±1.25	6.12	30.11±0.14	4.68	-2.707
HERPUD1	13744	30.02±1.30	5.62	30.25±0.85	5.02	-1.516
HIST2H2BE	4760	26.90±1.23	2.50	27.82±0.09	2.59	1.063
HMOX1	5013	26.02±1.28	1.62	26.27±0.04	1.04	-1.504
HNRNPA1	5031	28.32±0.54	3.92	28.74±0.23	3.51	-1.332
HOXC10	5122	27.66±1.14	3.07	30.04±0.21	4.61	2.891
HOXC9	5130	29.62±0.94	5.03	30.85±0.16	5.42	1.303
HSD3B7	18324	27.27±0.93	2.68	27.67±0.29	2.24	-1.358
HSPA2	5235	25.76±0.37	1.36	27.17±0.40	1.94	1.498
HSPB7	5249	26.27±1.13	1.68	26.49±0.20	1.06	-1.540
ID1	5360	22.57±0.06	-1.83	21.16±0.06	-4.08	-4.729
ID3	5362	24.97±1.18	0.57	24.90±0.15	-0.34	-1.868
IER3	5392	23.34±1.22	-1.06	22.90±0.12	-2.34	-2.426
IGFBP4	5473	25.73±0.98	1.14	25.83±0.22	0.40	-1.680
IL13RA2	5975	25.54±0.28	0.95	26.89±0.11	1.46	1.416
IL20RB	6004	30.70±1.36	6.11	28.95±0.21	3.52	-6.028
IL6	6018	27.68±1.09	3.28	28.39±0.28	3.16	-1.093
IRF2BP2	21729	27.14±1.24	2.74	27.53±0.19	2.30	-1.364
IRS2	6126	26.01±0.55	1.61	25.85±0.36	0.62	-1.993
JUN	6204	26.81±0.12	2.41	25.86±0.26	0.63	-3.438
JUND	6206	30.75±0.92	6.35	31.27±0.03	6.04	-1.243
KCNE4	6244	31.86±1.38	7.46	32.50±0.06	7.27	-1.142

KRT34	6452	28.52±1.20	4.12	28.82±0.08	3.59	-1.444
KRTAP1-5	16777	26.70±1.29	2.11	28.05±0.18	2.62	1.427
LBH	29532	27.03±1.14	2.63	26.97±0.23	1.74	-1.853
LDOC1	6548	29.77±1.14	5.18	30.64±0.25	5.21	1.021
LGALS3BP	6564	28.67±1.28	4.08	28.67±0.17	3.24	-1.786
LGR4	13299	27.72±1.41	3.32	28.96±0.03	3.73	1.332
LIF	6596	27.16±1.19	2.76	27.55±0.05	2.32	-1.358
LMCD1	6633	25.89±1.28	1.49	26.43±0.23	1.20	-1.227
LMO7	6646	23.04±0.59	-1.55	23.77±0.44	-1.66	-1.077
LRRC15	20818	28.31±1.45	3.72	27.96±0.18	2.53	-2.276
LRRC32	4161	29.18±1.28	4.59	29.52±0.36	4.09	-1.422
MALAT1	29665	31.12±1.21	6.72	32.16±0.25	6.93	1.154
MALL	6818	26.69±1.37	2.10	28.18±0.05	2.75	1.564
MFAP5	29673	23.16±0.54	-1.24	23.51±0.33	-1.72	-1.398
MIDN	13824	27.03±1.16	2.63	27.45±0.06	2.22	-1.336
MMP1	16298	21.72±0.50	-2.87	23.36±0.47	-2.07	1.737
MMS19	7155	29.47±1.40	5.07	30.35±0.16	5.12	1.029
MOXD1	21063	25.13±1.16	0.54	26.35±0.26	0.92	1.300
MT1E	7404	24.69±0.40	0.29	24.57±0.37	-0.66	-1.932
MT2A	7406	21.95±0.86	-2.45	21.70±0.29	-3.54	-2.126
MUC1	7508	28.23±1.25	3.83	29.36±0.27	4.13	1.234
MYADM	7544	29.86±1.62	5.46	30.90±0.25	5.67	1.154
MYC	7553	25.92±0.79	1.52	26.09±0.30	0.86	-1.589
MYL9	15754	22.20±1.20	-2.39	22.66±0.02	-2.78	-1.309
MYLK	7590	28.38±1.21	3.79	29.38±0.16	3.95	1.113
NBL1	7650	28.14±1.01	3.55	28.47±0.12	3.04	-1.429
NQO1	2874	25.00±0.79	0.41	25.89±0.31	0.46	1.033
PAM	8596	23.54±0.31	-0.86	24.07±0.35	-1.16	-1.231
PCDH10	13404	27.62±0.22	3.03	29.64±0.24	4.21	2.266
PHGDH	8923	28.37±1.34	3.78	28.60±0.34	3.17	-1.523
PIK3IP1	24942	28.10±1.25	3.51	29.56±0.04	4.13	1.537
PLEKHO2	30026	30.07±1.09	5.67	30.68±0.13	5.45	-1.171
PLXNB1	9103	27.29±0.84	2.70	27.91±0.34	2.48	-1.162
PMP22	9118	27.08±1.36	2.49	27.82±0.16	2.39	-1.074
POSTN	16953	27.19±1.37	2.60	27.05±0.09	1.62	-1.979
PPP1R3C	9293	27.36±1.42	2.96	28.46±0.04	3.23	1.203
PSG1	9514	26.44±0.08	1.85	27.52±0.21	2.09	1.180
PSG4	9521	26.62±0.13	2.03	25.33±0.42	-0.10	-4.382
PTGES	9599	29.47±1.25	4.88	30.67±0.04	5.24	1.283
PTGIS	9603	28.10±1.33	3.51	26.94±0.07	1.51	-4.009
PTGS1	9604	28.40±1.23	3.81	27.85±0.17	2.42	-2.615
QPCT	9753	28.87±1.01	4.47	30.69±0.60	5.46	1.979
RAB3B	9778	29.81±1.11	5.22	30.57±0.19	5.14	-1.058
RPL22L1	27610	33.07±0.32	8.48	31.71±0.19	6.28	-4.611
RPL36A	135255	19.97±0.04	-4.43	20.00±0.17	-5.23	-1.737
RPS21	10409	20.74±0.12	-3.66	20.88±0.28	-4.35	-1.613
RPS3	10420	21.59±1.01	-2.81	22.01±0.28	-3.23	-1.330
RSPO3	20866	26.49±0.83	2.09	27.67±0.12	2.44	1.273
SERINC2	23231	30.31±1.58	5.72	30.65±0.35	5.22	-1.417
SERPINH1	1546	23.70±1.34	-0.70	24.16±0.02	-1.08	-1.300
SFRP4	10778	29.33±0.62	4.74	28.61±0.35	3.18	-2.949
SGK1	10810	24.36±1.25	-0.04	24.73±0.11	-0.50	-1.379

SH3BGR	10822	29.61±0.27	5.02	29.66±0.28	4.23	-1.739
SLC16A3	10924	27.13±1.23	2.54	27.74±0.21	2.31	-1.173
SLC2A1	11005	29.72±1.40	5.32	29.63±0.04	4.40	-1.899
SMAD7	6773	29.46±1.29	4.87	29.84±0.18	4.41	-1.384
SOCS1	19383	28.27±0.38	3.87	28.51±0.40	3.28	-1.509
SPON2	11253	26.86±1.08	2.27	27.43±0.18	2.00	-1.210
STBD1	24854	27.45±0.71	3.05	27.95±0.25	2.72	-1.258
STC2	11374	28.16±1.38	3.57	28.76±0.10	3.33	-1.181
STMN2	10577	24.61±0.49	0.02	23.97±0.31	-1.46	-2.796
SYNPO2	17732	32.79±1.15	8.20	33.64±0.20	8.21	1.009
TBX1	11592	34.10±1.24	9.51	32.46±0.18	7.03	-5.592
TFPI2	11761	23.89±0.56	-0.70	25.16±0.46	-0.28	1.343
TGM2	11778	36.78±1.61	12.19	36.78±0.16	11.35	-1.786
THBS1	11785	20.45±1.43	-3.95	21.02±0.07	-4.21	-1.195
THBS2	11786	25.54±0.90	0.95	25.78±0.08	0.35	-1.519
TM4SF1	11853	26.38±0.05	1.79	27.93±0.06	2.50	1.636
TNFRSF12A	18152	25.03±1.05	0.63	25.25±0.24	0.02	-1.530
TOB1	11979	25.05±0.31	0.65	25.43±0.23	0.20	-1.366
TSC22D3	3051	29.30±1.44	4.90	29.00±0.09	3.77	-2.191
UCHL1	12513	23.26±0.57	-1.14	24.06±0.35	-1.17	-1.021
WISP2	12770	33.59±0.27	9.00	28.94±0.15	3.51	-45.203
WNT5B	16265	27.58±1.32	2.99	27.91±0.21	2.48	-1.429
XG	34022	27.11±0.38	2.52	26.83±0.14	1.40	-2.168
ZNF503	23589	25.21±0.30	0.62	25.30±0.20	-0.13	-1.686

Abbreviations. SD. standard deviation.

[a] the ΔC_t value was calculated as [C_t of the selected gene - C_t of the reference genes].

[b] the Fold Change in the TTD pool versus Control pool upon UV-irradiation was calculated as $2^{-(\Delta Ct\ patients\ -\ \Delta Ct\ controls)}$ by using the $2^{-\Delta\Delta Ct}$ method (Livak and Schmittgen. 2001). A Fold Change = 1 indicates no variation in the gene expression between the two pools. Fold Change values > +1 correspond to genes with increased expression in the TTD pool compared to Control pool whereas Fold Change values < -1 correspond to genes with lowered expression in the TTD pool compared to Control pool.

Table S10. Expression levels of the 174 deregulated genes in Control-pools in basal condition and after UV, analyzed by RealTime Ready Custom Panels

Gene Symbol	Source: HGNC Symbol; Acc	Control NT		Control UV		Fold Change[b]
		C_t Mean±SD	ΔC_t[a]	C_t Mean±SD	ΔC_t[a]	
ACOT1	41	28.53±1.01	4.30	29.70±0.20	4.27	-1.021012126
ADM	359	27.50±1.18	3.47	28.41±0.20	3.18	-1.21981864
ADRA2A	281	26.64±0.20	2.42	27.06±0.21	1.63	-1.725084064
AHR	348	26.13±0.86	2.09	27.55±0.14	2.32	1.172834949
AKAP2	372	23.97±0.79	-0.07	25.32±0.33	0.08	1.110852038
AKR1C2	385	25.28±1.17	1.25	26.68±0.14	1.45	1.15135548
ALDH1A3	409	25.95±1.00	1.73	27.28±0.08	1.85	1.085480142
ALDH1B1	407	28.49±1.15	4.26	29.55±0.00	4.12	-1.104454001
ALDH3B1	410	28.44±1.03	4.21	29.38±0.14	3.95	-1.200248667
ANGPTL4	16039	28.76±0.96	4.73	30.10±0.06	4.87	1.10063288
ANP32A	13233	26.45±0.98	2.41	27.58±0.24	2.35	-1.042465761
ANTXR1	21014	24.90±1.01	0.87	25.85±0.09	0.62	-1.190581735
AP000654.2	-	25.84±0.86	1.81	27.23±0.17	2.00	1.143402487
AP1S2	560	25.62±0.18	1.39	26.13±0.31	0.70	-1.613283518
APBB1IP	17379	30.70±1.03	6.47	31.94±0.08	6.51	1.025741121
ARHGAP23	29293	28.58±0.74	4.55	30.07±0.02	4.84	1.221228644
ASS1	758	25.81±1.09	1.58	27.33±0.16	1.90	1.244011653
ATF5	790	26.58±1.20	2.36	27.49±0.15	2.06	-1.232567509
ATP13A3	24113	25.44±1.10	1.21	27.67±0.14	2.24	2.03731162
C14orf4	-	29.03±1.23	4.99	30.64±0.09	5.41	1.330221659
C15orf39	-	28.80±0.68	4.76	30.33±0.54	5.10	1.258466372
C1orf198	-	25.33±1.29	1.10	27.14±0.20	1.71	1.526259209
C4orf49	-	27.73±0.13	3.51	28.22±0.37	2.79	-1.649086033
C8orf58	-	27.86±0.75	3.82	29.20±0.05	3.97	1.103178822
CABLES1	25097	31.31±1.14	7.28	32.94±0.01	7.71	1.34567809
CAMK2N1	24190	32.33±0.54	8.10	33.17±0.70	7.74	-1.28788163
CCDC8	25367	27.06±0.57	3.03	28.57±0.37	3.34	1.242575344
CCRL1	1611	24.66±0.51	0.62	25.51±0.34	0.28	-1.265756594
CLEC3B	11891	28.53±1.25	4.31	29.64±0.23	4.21	-1.073012339
CLGN	2060	30.04±0.23	5.82	30.56±0.35	5.13	-1.609560345
CLIC3	2064	32.91±1.64	8.68	34.20±0.08	8.77	1.064370182
CLU	2095	22.53±1.19	-1.70	23.83±0.21	-1.61	1.068065408
CNN1	2155	28.55±1.32	4.51	29.35±0.16	4.12	-1.317984436
COL4A1	2202	28.94±0.88	4.72	30.21±0.13	4.78	1.044877153
CRABP2	2339	24.48±1.16	0.26	25.74±0.25	0.31	1.034069629
CRLF1	2364	27.17±1.27	2.94	28.34±0.32	2.91	-1.026926789
CRYAB	2389	30.08±0.55	5.85	30.79±0.33	5.36	-1.409320755
CRYZ	2419	30.63±0.54	6.40	31.75±0.61	6.32	-1.059463094
CSRP2	2470	25.60±0.61	1.37	26.68±0.53	1.25	-1.093030254
CTGF	2500	22.58±0.68	-1.46	23.77±0.14	-1.46	-1
CTSC	2528	26.65±0.90	2.61	27.70±0.38	2.47	-1.104454001
CTSK	2536	22.24±0.99	-1.80	23.42±0.16	-1.82	-1.012788784
CYR61	2654	21.19±1.04	-2.85	21.64±0.13	-3.60	-1.675974269
DCAF4	20229	29.15±1.33	5.11	30.82±0.13	5.59	1.394743666
DDIT3	2726	26.65±0.58	2.61	27.56±0.29	2.33	-1.221228644
DDIT4	24944	28.07±0.91	4.03	29.02±0.12	3.79	-1.187834082

DNAJB1	5270	28.70±1.05	4.66	29.43±0.22	4.20	-1.383510251
DPP4	3009	25.19±1.01	0.96	26.45±0.17	1.02	1.042465761
DSP	3052	25.96±0.84	1.73	27.77±0.13	2.34	1.522736872
DUSP1	3064	23.48±1.08	-0.56	24.14±0.30	-1.10	-1.452293792
EGR1	3238	24.88±0.92	0.84	24.37±0.14	-0.86	-3.249009585
EIF4EBP1	3288	24.92±1.02	0.89	25.98±0.24	0.75	-1.099362113
EPDR1	17572	26.76±1.00	2.53	27.86±0.23	2.43	-1.07549439
EPS8L2	21296	30.06±0.87	6.02	30.66±0.11	5.43	-1.505246747
F2R	3537	27.15±1.14	2.92	28.63±0.19	3.20	1.209994089
FAM118A	1313	29.76±0.82	5.73	31.03±0.01	5.80	1.048504704
FAM43A	26888	24.32±0.47	0.28	24.76±0.24	-0.47	-1.68568309
FBXO32	16731	28.20±0.95	4.16	29.79±0.07	4.56	1.316462719
FGF7	3685	22.38±0.39	-1.85	23.69±0.48	-1.74	1.079228237
FNDC4	20239	28.56±1.28	4.34	29.82±0.28	4.39	1.037659659
FOSB	3797	28.95±0.70	4.91	28.88±0.05	3.65	-2.403272099
FOXO3	3821	31.50±1.25	7.46	33.53±0.11	8.30	1.779740212
GADD45A	4095	28.10±0.93	4.06	28.11±0.15	2.88	-2.27889323
GADD45B	4096	31.53±1.31	7.50	31.55±0.62	6.32	-2.260538779
GALNTL2	21531	27.82±0.98	3.59	29.06±0.33	3.63	1.025741121
GAS1	4165	27.02±1.04	2.98	28.47±0.32	3.24	1.190581735
GAS5	10183	32.24±0.70	8.02	31.37±0.23	5.94	-4.218314518
GAS6	4168	24.24±1.34	0.01	25.50±0.18	0.07	1.0364616
GDF15	30142	34.02±1.21	9.98	34.16±0.12	8.93	-2.077718207
GDF6	4221	30.88±0.85	6.84	32.51±0.04	7.28	1.348790861
GLRX	4330	25.16±0.31	1.13	25.72±0.20	0.49	-1.554732811
GNG11	4403	33.59±0.13	9.36	33.89±0.24	8.46	-1.870382496
GPX3	4555	34.66±1.34	10.43	35.95±0.00	10.52	1.064370182
GYPC	4704	27.79±1.01	3.57	28.81±0.16	3.38	-1.138131035
HAND2	4808	28.15±1.05	3.93	29.48±0.47	4.05	1.089248656
HAPLN3	21446	28.67±1.19	4.44	30.11±0.14	4.68	1.180992661
HERPUD1	13744	28.03±0.87	3.99	30.25±0.85	5.02	2.03731162
HIST2H2BE	4760	26.45±0.79	2.41	27.82±0.09	2.59	1.126358954
HMOX1	5013	24.43±1.27	0.40	26.27±0.04	1.04	1.556529946
HNRNPA1	5031	27.86±0.43	3.82	28.74±0.23	3.51	-1.2397077
HOXB7	5118	33.62±1.11	9.58	37.43±3.64	12.20	6.126231988
HOXC10	5122	28.68±1.20	4.45	30.04±0.21	4.61	1.113421618
HOXC9	5130	29.84±1.08	5.61	30.85±0.16	5.42	-1.144724161
HSD3B7	18324	26.84±0.80	2.61	27.67±0.29	2.24	-1.296839555
HSPA2	5235	26.71±0.43	2.67	27.17±0.40	1.94	-1.658639092
HSPB7	5249	25.49±0.94	1.27	26.49±0.20	1.06	-1.154018752
ID1	5360	21.12±0.11	-2.91	21.16±0.06	-4.08	-2.237157249
ID3	5362	23.38±1.12	-0.65	24.90±0.15	-0.34	1.246889254
IER3	5392	22.80±1.07	-1.23	22.90±0.12	-2.34	-2.146024679
IGFBP4	5473	25.11±0.46	0.88	25.83±0.22	0.40	-1.399585866
IL13RA2	5975	26.26±0.30	2.04	26.89±0.11	1.46	-1.496577164
IL20RB	6004	27.78±1.10	3.55	28.95±0.21	3.52	-1.026926789
IL6	6018	27.53±0.77	3.49	28.39±0.28	3.16	-1.261377409
IRF2BP2	21729	26.27±1.01	2.23	27.53±0.19	2.30	1.04367076
IRS2	6126	24.69±0.52	0.66	25.85±0.36	0.62	-1.029302237
JUN	6204	25.03±0.23	0.99	25.86±0.26	0.63	-1.28788163
JUND	6206	31.08±0.60	7.04	31.27±0.03	6.04	-2
KCNE4	6244	32.62±1.26	8.58	32.50±0.06	7.27	-2.493778507

KRT34	6452	27.99±1.00	3.95	28.82±0.08	3.59	-1.283425898
KRTAP1-5	16777	26.86±1.17	2.63	28.05±0.18	2.62	-1.00695555
LBH	29532	25.08±1.04	1.04	26.97±0.23	1.74	1.620755722
LDOC1	6548	29.76±1.06	5.53	30.64±0.25	5.21	-1.248330549
LGALS3BP	6564	27.65±1.22	3.43	28.67±0.17	3.24	-1.138131035
LGR4	13299	27.39±1.28	3.35	28.96±0.03	3.73	1.298338588
LIF	6596	25.88±0.79	1.85	27.55±0.05	2.32	1.383510251
LMCD1	6633	24.32±1.15	0.28	26.43±0.23	1.20	1.881217511
LMO7	6646	22.30±0.57	-1.92	23.77±0.44	-1.66	1.200248667
LRRC15	20818	26.69±1.25	2.47	27.96±0.18	2.53	1.044877153
LRRC32	4161	28.07±0.98	3.85	29.52±0.36	4.09	1.179629113
MALAT1	29665	31.77±1.04	7.73	32.16±0.25	6.93	-1.745128575
MALL	6818	26.72±1.36	2.49	28.18±0.05	2.75	1.193335743
MFAP5	29673	22.56±0.48	-1.48	23.51±0.33	-1.72	-1.183724489
MIDN	13824	25.99±0.95	1.96	27.45±0.06	2.22	1.196096122
MMP1	16298	22.51±0.55	-1.72	23.36±0.47	-2.07	-1.274560627
MMS19	7155	29.03±1.14	4.99	30.35±0.16	5.12	1.090507733
MOXD1	21063	25.06±1.02	0.83	26.35±0.26	0.92	1.060687741
MT1E	7404	24.24±0.43	0.20	24.57±0.37	-0.66	-1.815038311
MT2A	7406	21.00±0.82	-3.04	21.70±0.29	-3.54	-1.412580742
MUC1	7508	28.16±1.13	4.13	29.36±0.27	4.13	1.002313162
MYADM	7544	28.87±1.43	4.83	30.90±0.25	5.67	1.785919022
MYC	7553	25.46±0.71	1.42	26.09±0.30	0.86	-1.479387509
MYL9	15754	21.59±1.22	-2.63	22.66±0.02	-2.78	-1.103178822
MYLK	7590	28.25±0.95	4.02	29.38±0.16	3.95	-1.055797631
NBL1	7650	27.71±0.72	3.48	28.47±0.12	3.04	-1.361314116
NQO1	2874	24.87±0.82	0.64	25.89±0.31	0.46	-1.135504429
PAM	8596	23.34±0.35	-0.70	24.07±0.35	-1.16	-1.375541818
PCDH10	13404	28.82±0.25	4.59	29.64±0.24	4.21	-1.301341855
PHGDH	8923	27.36±1.41	3.14	28.60±0.34	3.17	1.023373892
PIK3IP1	24942	28.80±1.21	4.58	29.56±0.04	4.13	-1.362887677
PLEKHO2	30026	29.38±0.75	5.34	30.68±0.13	5.45	1.07549439
PLXNB1	9103	26.91±0.82	2.69	27.91±0.34	2.48	-1.154018752
PMP22	9118	26.12±1.11	1.89	27.82±0.16	2.39	1.414213562
POSTN	16953	25.52±1.05	1.29	27.05±0.09	1.62	1.24977351
PPP1R3C	9293	27.14±1.17	3.11	28.46±0.04	3.23	1.089248656
PSG1	9514	27.29±0.19	3.06	27.52±0.21	2.09	-1.970188043
PSG4	9521	25.10±0.17	0.88	25.33±0.42	-0.10	-1.974745407
PTGES	9599	29.18±1.12	4.96	30.67±0.04	5.24	1.217003514
PTGIS	9603	25.79±1.15	1.56	26.94±0.07	1.51	-1.035264924
PTGS1	9604	26.75±1.21	2.52	27.85±0.17	2.42	-1.074252648
QPCT	9753	29.08±0.88	5.04	30.69±0.60	5.46	1.330221659
RAB3B	9778	29.22±0.89	4.99	30.57±0.19	5.14	1.105730653
RPL22L1	27610	31.26±0.17	7.04	31.71±0.19	6.28	-1.695448152
RPL36A	135255	19.94±0.07	-4.09	20.00±0.17	-5.23	-2.198724227
RPS21	10409	20.68±0.13	-3.36	20.88±0.28	-4.35	-1.990779358
RPS3	10420	21.24±0.84	-2.80	22.01±0.28	-3.23	-1.34567809
RSPO3	20866	26.30±0.83	2.26	27.67±0.12	2.44	1.126358954
SERINC2	23231	29.27±1.30	5.04	30.65±0.35	5.22	1.132883885
SERPINH1	1546	22.92±1.24	-1.12	24.16±0.02	-1.08	1.031683179
SFRP4	10778	27.68±0.55	3.45	28.61±0.35	3.18	-1.205807828
SGK1	10810	23.69±1.03	-0.34	24.73±0.11	-0.50	-1.114708637

SH3BGR	10822	29.12±0.43	4.89	29.66±0.28	4.23	-1.589235949
SLC16A3	10924	26.54±1.33	2.32	27.74±0.21	2.31	-1.004631674
SLC2A1	11005	28.15±1.24	4.12	29.63±0.04	4.40	1.212793001
SMAD7	6773	26.66±1.23	2.43	29.84±0.18	4.41	3.931282394
SOCS1	19383	29.29±0.27	5.25	28.51±0.40	3.28	-3.926743421
SPON2	11253	26.53±1.13	2.30	27.43±0.18	2.00	-1.235418637
STBD1	24854	26.61±0.69	2.57	27.95±0.25	2.72	1.105730653
STC2	11374	27.65±1.22	3.43	28.76±0.10	3.33	-1.069299999
STMN2	10577	23.08±0.61	-1.15	23.97±0.31	-1.46	-1.242575344
SYNPO2	17732	32.53±1.00	8.30	33.64±0.20	8.21	-1.064370182
TBX1	11592	31.17±0.92	6.95	32.46±0.18	7.03	1.059463094
TFPI2	11761	24.28±0.39	0.06	25.16±0.46	-0.28	-1.258466372
TGM2	11778	35.15±1.51	10.92	36.78±0.16	11.35	1.3441244
THBS1	11785	19.48±1.25	-4.56	21.02±0.07	-4.21	1.274560627
THBS2	11786	24.77±0.83	0.54	25.78±0.08	0.35	-1.140763716
TM4SF1	11853	27.42±0.21	3.19	27.93±0.06	2.50	-1.613283518
TNFRSF12A	18152	24.29±0.93	0.25	25.25±0.24	0.02	-1.175547906
TOB1	11979	25.47±0.30	1.43	25.43±0.23	0.20	-2.351095813
TSC22D3	3051	28.43±1.28	4.39	29.00±0.09	3.77	-1.542210825
UCHL1	12513	23.48±0.38	-0.56	24.06±0.35	-1.17	-1.526259209
WISP2	12770	28.76±0.20	4.53	28.94±0.15	3.51	-2.039666575
WNT5B	16265	26.50±1.19	2.27	27.91±0.21	2.48	1.15002615
XG	34022	26.16±0.43	1.93	26.83±0.14	1.40	-1.443929196
ZNF503	23589	24.76±0.25	0.53	25.30±0.20	-0.13	-1.583737611

Abbreviations. SD, standard deviation.

[a] the ΔC_t value was calculated as [C_t of the selected gene - C_t of the reference genes].

[b] the Fold Change of the Control pool in basal condition versus UV irradiation was calculated as $2^{-(\Delta Ct\ patients\ -\ \Delta Ct\ controls)}$ by using the $2^{-\Delta\Delta Ct}$ method (Livak and Schmittgen, 2001). A Fold Change = 1 indicates no variation in the gene expression between the two pools. Fold Change values > +1 correspond to genes with increased expression whereas Fold Change values < -1 correspond to genes with lowered expression.

Table S11. Expression levels of the 174 deregulated genes in TTD in basal condition and after UV, analyzed by RealTime Ready Custom Panel

Gene Symbol	Source: HGNC Symbol; Acc	TTD patients nt		TTD patients uv		Fold Change[b]
		C_t Mean±SD	ΔC_t[a]	C_t Mean±SD	ΔC_t[a]	
ACOT1	41	29.86±0.10	4.45	28.77±1.17	3.91	-1.452
ADM	359	21.63±0.14	3.17	27.48±1.13	3.08	-1.058
ADRA2A	281	28.28±0.24	1.32	26.34±0.18	1.47	1.113
AHR	348	26.17±0.40	2.45	26.86±1.13	2.46	1.013
AKAP2	372	25.57±0.08	0.18	24.85±0.95	0.45	1.203
AKR1C2	385	24.79±0.05	1.90	25.74±1.17	1.34	-1.466
ALDH1A3	409	33.13±0.03	1.69	26.47±1.10	1.61	-1.059
ALDH1B1	407	24.57±0.16	4.73	29.76±1.29	4.89	1.121
ALDH3B1	410	36.44±0.32	4.29	28.61±1.25	3.74	-1.456
ANGPTL4	16039	24.69±0.49	4.62	30.83±1.06	6.43	3.515
ANP32A	13233	25.86±0.13	2.53	26.69±1.09	2.29	-1.178
ANTXR1	21014	30.41±0.36	0.96	25.31±1.11	0.91	-1.033
AP000654.2	-	28.17±0.52	2.31	26.36±1.16	1.96	-1.275
AP1S2	560	19.96±0.00	0.70	25.82±0.11	0.95	1.192
APBB1IP	17379	32.68±0.06	7.93	32.36±1.37	7.49	-1.352
ARHGAP23	29293	27.24±0.01	3.74	28.37±1.12	3.97	1.177
ASS1	758	20.89±0.19	1.40	25.82±1.24	0.96	-1.355
ATF5	790	33.51±0.00	3.25	27.57±1.30	2.70	-1.461
ATP13A3	24113	26.22±0.04	1.98	27.38±1.33	2.51	1.447
C14orf4	-	23.41±0.11	5.74	29.94±1.53	5.54	-1.147
C15orf39	-	29.95±0.01	5.17	30.43±0.76	6.03	1.817
C1orf198	-	26.41±0.01	1.25	26.05±1.42	1.19	-1.041
C4orf49	-	35.58±0.21	2.71	27.83±0.13	2.96	1.189
C8orf58	-	29.36±0.30	4.12	29.08±0.84	4.68	1.471
CABLES1	25097	27.41±0.14	7.38	31.84±1.26	7.44	1.045
CAMK2N1	24190	20.77±0.16	7.82	33.13±0.49	8.26	1.364
CCDC8	25367	33.25±0.32	2.93	28.17±0.48	3.77	1.800
CCRL1	1611	30.98±0.13	-0.57	23.86±0.58	-0.54	1.020
CLEC3B	11891	27.56±0.11	3.83	28.14±1.32	3.27	-1.469
CLGN	2060	27.44±0.16	4.11	29.30±0.33	4.43	1.251
CLIC3	2064	30.34±0.86	9.56	33.87±1.61	9.00	-1.474
CLU	2095	27.76±0.23	-0.25	24.09±1.25	-0.78	-1.441
CNN1	2155	28.15±0.04	4.27	28.55±1.25	4.15	-1.087
COL4A1	2202	23.73±0.23	4.63	29.84±1.16	4.97	1.266
CRABP2	2339	25.87±0.24	-0.42	23.85±1.20	-1.02	-1.512
CRLF1	2364	33.28±0.10	3.42	28.03±1.52	3.16	-1.193
CRYAB	2389	30.06±0.13	4.91	30.21±0.36	5.34	1.350
CRYZ	2419	24.05±0.36	6.32	30.87±0.74	6.00	-1.248
CSRP2	2470	27.55±0.04	3.10	27.28±0.70	2.42	-1.606
CTGF	2500	30.91±0.05	-0.56	24.72±0.83	0.32	1.834
CTSC	2528	29.54±0.25	2.34	26.50±0.99	2.10	-1.178
CTSK	2536	24.14±0.25	-1.37	22.72±1.09	-1.68	-1.240
CYR61	2654	29.72±0.08	-2.42	21.75±1.21	-2.65	-1.170
DCAF4	20229	28.81±0.13	5.67	30.39±1.40	5.99	1.253
DDIT3	2726	26.57±0.30	3.44	27.69±0.77	3.29	-1.112

DDIT4	24944	25.83±0.14	4.12	27.70±1.00	3.30	-1.759
DNAJB1	5270	25.42±0.18	4.65	28.79±1.18	4.39	-1.195
DPP4	3009	28.03±0.21	1.81	26.21±1.26	1.35	-1.374
DSP	3052	25.52±0.11	2.49	27.43±1.25	2.57	1.055
DUSP1	3064	25.62±0.01	-0.44	23.56±1.27	-0.84	-1.323
EGR1	3238	26.13±0.33	0.88	24.55±1.15	0.15	-1.662
EIF4EBP1	3288	28.14±0.11	2.00	26.09±1.08	1.69	-1.240
EPDR1	17572	30.67±0.11	3.00	27.48±1.16	2.62	-1.300
EPS8L2	21296	26.94±0.15	5.65	29.93±1.15	5.53	-1.083
F2R	3537	25.65±0.27	3.72	28.21±1.42	3.34	-1.294
FAM118A	1313	28.98±0.11	5.74	30.58±0.85	6.18	1.360
FAM43A	26888	25.35±0.35	-0.67	24.72±0.43	0.32	1.982
FBXO32	16731	26.42±0.14	5.01	29.58±1.20	5.18	1.128
FGF7	3685	30.25±0.04	-2.02	23.48±0.54	-1.39	1.551
FNDC4	20239	30.16±0.21	4.47	28.71±1.47	3.84	-1.539
FOSB	3797	27.58±0.11	4.02	28.25±1.06	3.85	-1.119
FOXO3	3821	26.75±0.21	7.44	32.68±1.42	8.28	1.796
GADD45A	4095	26.16±0.11	4.84	28.24±1.05	3.84	-1.988
GADD45B	4096	27.53±0.06	7.82	32.24±1.35	7.84	1.014
GALNTL2	21531	28.08±0.19	4.72	29.21±1.17	4.34	-1.297
GAS1	4165	31.15±0.15	3.34	27.35±1.17	2.95	-1.307
GAS5	10183	26.01±0.20	8.55	31.61±0.74	6.74	-3.498
GAS6	4168	30.23±0.09	0.23	24.65±1.49	-0.22	-1.366
GDF15	30142	27.92±0.13	11.24	33.95±1.26	9.55	-3.234
GDF6	4221	23.94±0.30	10.34	35.33±1.00	10.93	1.507
GLRX	4330	32.62±0.00	0.63	25.39±0.32	0.99	1.280
GNG11	4403	22.73±0.20	7.70	33.55±0.22	8.69	1.982
GPX3	4555	29.32±0.05	12.26	36.61±1.58	11.74	-1.426
GYPC	4704	27.29±0.06	4.12	28.62±1.31	3.76	-1.286
HAND2	4808	26.80±0.19	5.50	29.92±1.04	5.05	-1.361
HAPLN3	21446	24.68±0.15	5.72	30.71±1.25	5.84	1.091
HERPUD1	13744	33.06±0.57	6.45	30.02±1.30	5.62	-1.778
HIST2H2BE	4760	27.69±0.02	2.34	26.90±1.23	2.50	1.119
HMOX1	5013	30.18±0.18	0.98	26.02±1.28	1.62	1.562
HNRNPA1	5031	28.18±0.13	4.01	28.32±0.54	3.92	-1.058
HOXB7	5118	34.70±0.57	11.30	34.71±0.98	10.31	-1.991
HOXC10	5122	31.63±0.06	3.39	27.66±1.14	2.80	-1.509
HOXC9	5130	27.74±0.05	5.59	29.62±0.94	4.76	-1.782
HSD3B7	18324	26.20±0.04	3.03	27.27±0.93	2.40	-1.542
HSPA2	5235	26.68±0.05	1.18	25.76±0.37	1.36	1.130
HSPB7	5249	30.44±0.13	1.37	26.27±1.13	1.41	1.029
ID1	5360	29.25±0.49	-3.61	22.57±0.06	-1.83	3.426
ID3	5362	28.41±0.21	-0.46	24.97±1.18	0.57	2.030
IER3	5392	27.12±0.06	-0.35	23.34±1.22	-1.06	-1.638
IGFBP4	5473	33.46±0.16	0.73	25.73±0.98	0.87	1.103
IL13RA2	5975	30.89±0.29	0.40	25.54±0.28	0.68	1.211
IL20RB	6004	29.51±0.21	6.59	30.70±1.36	5.83	-1.693
IL6	6018	23.73±0.25	4.20	27.68±1.09	3.28	-1.888
IRF2BP2	21729	28.85±0.27	2.00	27.14±1.24	2.74	1.674
IRS2	6126	28.68±0.21	1.33	26.01±0.55	1.61	1.214
JUN	6204	29.90±0.21	0.92	26.81±0.12	2.41	2.793
JUND	6206	29.26±0.09	6.39	30.75±0.92	6.35	-1.026

Gene	ID	Col3	Col4	Col5	Col6	Col7
KCNE4	6244	22.46±0.17	8.45	31.86±1.38	7.46	-1.984
KRT34	6452	27.45±0.10	4.08	28.52±1.20	4.12	1.032
KRTAP1-5	16777	30.98±0.01	2.43	26.70±1.29	1.83	-1.516
LBH	29532	30.10±0.10	2.31	27.03±1.14	2.63	1.253
LDOC1	6548	22.82±0.16	5.33	29.77±1.14	4.90	-1.339
LGALS3BP	6564	29.17±0.27	4.12	28.67±1.28	3.80	-1.244
LGR4	13299	22.66±0.06	2.91	27.72±1.41	3.32	1.326
LIF	6596	27.77±0.08	2.32	27.16±1.19	2.76	1.358
LMCD1	6633	27.58±0.07	0.62	25.89±1.28	1.49	1.834
LMO7	6646	24.78±0.01	-1.70	23.04±0.59	-1.83	-1.094
LRRC15	20818	28.85±0.11	3.79	28.31±1.45	3.44	-1.270
LRRC32	4161	29.89±0.11	4.47	29.18±1.28	4.32	-1.112
MALAT1	29665	27.69±0.08	7.48	31.12±1.21	6.72	-1.684
MALL	6818	30.41±0.11	2.02	26.69±1.37	1.82	-1.146
MFAP5	29673	31.18±0.36	-1.31	23.16±0.54	-1.24	1.049
MIDN	13824	27.24±0.08	2.20	27.03±1.16	2.63	1.355
MMP1	16298	23.87±0.10	-2.97	21.72±0.50	-3.14	-1.128
MMS19	7155	28.07±0.08	4.99	29.47±1.40	5.07	1.063
MOXD1	21063	29.55±0.06	0.68	25.13±1.16	0.26	-1.333
MT1E	7404	31.02±0.21	0.11	24.69±0.40	0.29	1.133
MT2A	7406	27.97±0.06	-2.51	21.95±0.86	-2.45	1.045
MUC1	7508	31.75±0.14	4.29	28.23±1.25	3.83	-1.379
MYADM	7544	29.22±0.16	5.78	29.86±1.62	5.46	-1.245
MYC	7553	27.55±0.08	1.89	25.92±0.79	1.52	-1.285
MYL9	15754	29.02±0.17	-2.29	22.20±1.20	-2.66	-1.295
MYLK	7590	27.13±0.21	3.74	28.38±1.21	3.51	-1.170
NBL1	7650	29.55±0.01	3.42	28.14±1.01	3.27	-1.107
NQO1	2874	29.15±0.12	0.55	25.00±0.79	0.14	-1.332
PAM	8596	23.14±0.03	-1.20	23.54±0.31	-0.86	1.261
PCDH10	13404	30.15±0.05	2.33	27.62±0.22	2.75	1.346
PHGDH	8923	29.34±0.21	3.97	28.37±1.34	3.50	-1.385
PIK3IP1	24942	28.43±0.18	3.88	28.10±1.25	3.23	-1.560
PLEKHO2	30026	28.24±0.16	5.43	30.07±1.09	5.67	1.188
PLXNB1	9103	28.58±0.07	2.81	27.29±0.84	2.42	-1.306
PMP22	9118	24.80±0.00	2.54	27.08±1.36	2.22	-1.247
POSTN	16953	25.98±0.04	2.64	27.19±1.37	2.32	-1.241
PPP1R3C	9293	26.11±0.08	2.84	27.36±1.42	2.96	1.093
PSG1	9514	30.76±0.08	0.98	26.44±0.08	1.57	1.510
PSG4	9521	25.63±0.06	1.51	26.62±0.13	1.75	1.185
PTGES	9599	29.15±0.25	4.29	29.47±1.25	4.60	1.243
PTGIS	9603	33.36±0.22	3.59	28.10±1.33	3.24	-1.278
PTGS1	9604	26.83±0.09	3.91	28.40±1.23	3.53	-1.297
QPCT	9753	30.93±0.04	5.19	28.87±1.01	4.47	-1.647
RAB3B	9778	25.66±0.10	5.01	29.81±1.11	4.94	-1.050
RPL22L1	27610	27.24±0.28	7.85	33.07±0.32	8.20	1.278
RPL36A	135255	29.53±0.03	-5.28	19.97±0.04	-4.43	1.798
RPS21	10409	29.40±0.27	-4.36	20.74±0.12	-3.66	1.619
RPS3	10420	25.68±0.30	-2.59	21.59±1.01	-2.81	-1.171
RSPO3	20866	37.69±0.29	2.05	26.49±0.83	2.09	1.029
SERINC2	23231	25.18±0.03	5.75	30.31±1.58	5.45	-1.230
SERPINH1	1546	29.88±0.05	-0.46	23.70±1.34	-0.70	-1.178
SFRP4	10778	29.72±0.08	4.67	29.33±0.62	4.46	-1.154

SGK1	10810	28.68±0.03	0.39	24.36±1.25	-0.04	-1.344
SH3BGR	10822	27.14±0.02	4.75	29.61±0.27	4.75	-1.002
SLC16A3	10924	29.26±0.11	2.31	27.13±1.23	2.26	-1.029
SLC2A1	11005	34.99±0.33	4.71	29.72±1.40	5.32	1.526
SMAD7	6773	28.82±0.01	2.85	29.46±1.29	4.60	3.356
SOCS1	19383	25.01±0.06	3.57	28.27±0.38	3.87	1.238
SPON2	11253	27.86±0.16	2.26	26.86±1.08	1.99	-1.203
STBD1	24854	29.90±0.02	2.79	27.45±0.71	3.05	1.195
STC2	11374	28.46±0.12	3.72	28.16±1.38	3.29	-1.344
STMN2	10577	29.31±0.12	0.25	24.61±0.49	-0.25	-1.417
SYNPO2	17732	28.53±0.14	8.03	32.79±1.15	7.92	-1.075
TBX1	11592	24.90±0.02	9.27	34.10±1.24	9.24	-1.023
TFPI2	11761	30.43±0.01	-1.29	23.89±0.56	-0.98	1.243
TGM2	11778	26.12±0.03	11.01	36.78±1.61	11.91	1.873
THBS1	11785	32.72±0.13	-4.48	20.45±1.43	-3.95	1.436
THBS2	11786	32.02±0.16	0.58	25.54±0.90	0.68	1.069
TM4SF1	11853	29.36±0.06	0.14	26.38±0.05	1.51	2.591
TNFRSF12A	18152	31.69±0.34	0.38	25.03±1.05	0.63	1.192
TOB1	11979	31.02±0.07	0.41	25.05±0.31	0.65	1.181
TSC22D3	3051	29.44±0.23	5.17	29.30±1.44	4.90	-1.209
UCHL1	12513	33.69±0.32	-1.51	23.26±0.57	-1.14	1.292
WISP2	12770	30.08±0.49	8.08	33.59±0.27	8.73	1.566
WNT5B	16265	36.54±0.66	2.75	27.58±1.32	2.71	-1.022
XG	34022	36.48±0.31	2.10	27.11±0.38	2.24	1.102
ZNF503	23589	33.98±0.04	0.09	25.21±0.30	0.35	1.195

Abbreviations. SD, standard deviation.

[a] the ΔC_t value was calculated as [C_t of the selected gene - C_t of the reference genes].

[b] the Fold Change in the TTD pool in basal condition versus UV-irradiation was calculated as $2^{-(\Delta Ct\ patients\ -\ \Delta Ct\ controls)}$ by using the $2^{-\Delta\Delta Ct}$ method (Livak and Schmittgen, 2001). A Fold Change = 1 indicates no variation in the gene expression between the two pools. Fold Change values > +1 correspond to genes with increased expression whereas Fold Change values < -1 correspond to genes with lowered expression.

Table S12. Expression levels of 60 differentially expressed genes selected for additional RealTime PCR analysis

Gene Symbol	TTD patients NT	Controls NT	TTD patients UV	Controls UV	Significance test TTD vs Controls in basal conditions	Significance test TTD vs Controls after UV-irradiation
	C_t Mean	C_t Mean	C_t Mean	C_t Mean	P(T<=t) two tails	P(T<=t) two tails
ADRA2A	28.405	28.525	25.610	27.375	0.438	0.325
ALDH1B1	33.691	34.190	34.726	34.075	0.1835	0.3668
ANGPTL4	25.076	24.271	26.419	25.337	1.435E-11	4.417E-11
APBB1IP	30.697	29.844	34.134	33.185	0.0291	0.0003
ATP13A3	27.187	27.050	27.853	27.578	0.232	0.972
CCRL1	26.421	25.585	25.932	25.812	0.066	0.204
c-Fos	26.217	27.033	23.671	24.191	0.573	0.307
c-Jun	22.991	22.827	23.962	23.276	1.838E-05	5.385E-13
CLGN	30.765	30.879	30.965	30.354	0.0037	0.0076
CLU	20.500	19.650	20.688	19.797	0.0016	0.0007
CRABP2	23.835	24.570	26.258	28.665	0.356	0.445
CSRP2	27.549	27.234	27.446	26.790	0.004	0.002
CTGF	22.743	24.077	23.382	22.601	0.698	0.943
EGR1	20.682	20.586	20.159	19.140	8.103E-05	3.192E-13
EIF4BP1	23.835	24.570	26.258	28.665	0.685	0.963
FosB	23.948	23.841	23.578	23.268	0.0002	6.119E-05
GADD45A	21.752	21.811	21.539	21.089	0.0011	5.223E-10
GADD45B	20.861	20.925	21.171	20.378	5.734E-06	6.349E-13
GALNTL2	27.226	28.271	28.154	29.702	0.970	0.866
GAS5*	34.564	32.476	32.987	31.765	-	-
GDF15	36.876	34.657	34.976	34.475	0.1049	0.0032
GDF6*	36.375	34.987	34.256	34.765	-	-
GNG11	33.564	33.765	34.867	34.543	0.5739	0.4987
GPX3	38.765	36.556	35.445	35.987	0.0261	0.0796
HAND2	29.742	29.521	29.575	29.272	0.7351	0.5951
HAPLN3	23.394	23.837	27.970	29.326	0.001	0.566
HERPUD1	28.158	26.982	24.478	26.141	0.004	0.0016
HOXB7	37.965	34.854	34.758	37.865	0.2481	0.0835
HOXC10	26.955	26.546	27.129	30.676	0.262	0.118
HSPA2	25.306	26.085	24.040	26.392	0.950	0.357
ID1	20.863	20.424	21.781	20.355	1.852E-09	1.780E-10
ID3	20.452	20.180	21.568	20.824	1.447E-06	1.472E-11
IER3	19.782	19.187	19.521	18.686	5.137E-08	1.249E-11
IL13RA2	28.158	27.371	24.478	26.141	0.951	0.943
IL20RB	26.245	23.552	26.185	23.754	5.587E-09	1.397E-09
JunD	27.264	27.148	26.811	26.960	4.942E-07	0.00012
KCNE4*	34.865	32.543	33.234	33.874	-	-
LBH	23.394	23.837	27.970	29.326	0.903	0.972
LRRC15	28.484	29.785	26.786	28.273	0.122	0.0005
MT2A	25.923	25.182	29.245	29.298	0.035	0.972
PCDH10	29.602	32.604	28.786	30.699	3.1238E-07	0.0014
POSTN	30.234	30.765	30.986	30.768	0.1271	0.3231
PSG1	28.186	27.756	28.679	27.011	0.762	0.852
PSG4	25.306	26.085	24.040	26.392	0.970	0.943
PTGIS	23.749	21.277	24.071	21.724	1.603E-05	7.125E-06
PTGIS1	30.122	28.186	30.189	28.039	0.027	0.009
RPL22L1	33.654	33.678	31.879	32.865	0.7398	0.0041
RPL36A	22.743	24.077	23.382	22.601	0.215	0.972
SFRP4	26.869	27.176	27.134	27.424	0.316	0.711
SMAD7	18.645	19.730	22.663	24.120	0.951	0.943
SOCS1*	29.876	29.789	29.347	28.689	-	-
STMN2	21.951	21.868	22.148	22.070	0.097	0.083
TBX1	28.150	28.835	32.542	28.756	2.315E-05	0.0003
TFPI2	23.721	23.282	22.871	23.111	0.560	0.963
TM4SF1	27.549	27.234	27.446	26.790	0.026	0.0001
TOB1	25.306	26.085	24.040	26.392	0.0007	0.114

TSC22D3*	30.976	29.789	29.236	29.879	-	-
WISP2	26.653	22.131	26.552	22.390	1.042E-08	2.404E-08
WNT4	30.030	28.418	29.930	28.224	4.890E-05	6.523E-05
XG*	29.965	29.689	29.543	29.795	-	-

* The Student-T test was not done because all Ct values were higher than 29.5