

Fig. S1. TINCR is induced during differentiation. 6 out of the top 15 differentially expressed noncoding RNAs from the transcriptome sequencing analysis were randomly selected and tested by qRT-PCR. Concordant changes in expression levels at days 3

and 6 of differentiation were observed for all **(a)** up- and **(b)** downregulated transcripts. Data are shown with s.d.m (n=4). **(c)** Gene ontology terms significantly enriched in the day 3 and day 6 altered transcriptome sequencing gene subset. **(d)** qRT-PCR analyses showed reduction of TINCR transcript abundance in human squamous cell carcinoma (SCC) specimens, compared to site-matched controls. **(e)** Single molecule RNA fluorescence in situ hybridization (FISH); graph (left) shows average percent of TINCR in the nucleus and cytoplasm. The two graphs on the right show the number of TINCR molecules in nucleus and cytoplasm. TINCR [white], Dapi [blue], scale bar=5 μ m. **(f)** Single molecule RNA fluorescence in situ hybridization (FISH) showing greatly increased abundance of TINCR molecules at late differentiation timepoint (day 8) compared to undifferentiated keratinocytes cultured for the same amount of time. TINCR [white], Dapi [blue], scale bar=7 μ m. **(g)** Single molecule RNA FISH showing significant enrichment of TINCR molecules in differentiated layers of human epidermis.

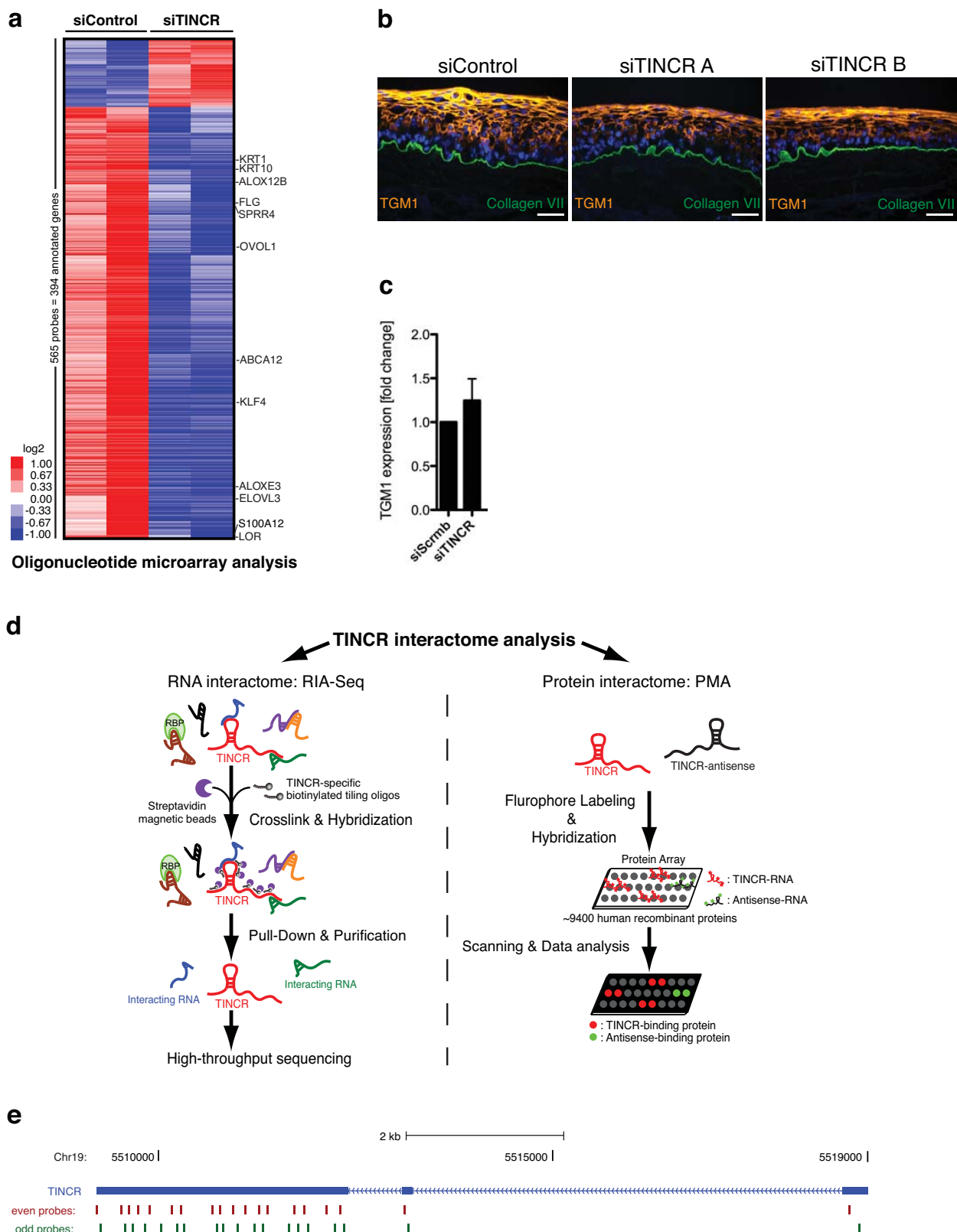


Fig. S2. TINCR regulates differentiation gene expression. **(a)** Heat map depicting transcript profiling of independent biologic replicate organotypic epidermal tissues with siRNA-mediated TINCR depletion versus control siRNA. Expression changes for each

probe are normalized to mean centered signal across all samples. **(b)** Differentiation protein TGM1 in TINCR-depleted organotypic human epidermis via independent TINCR siRNAs [A and B] versus scrambled control; differentiation proteins detected by immunofluorescence in orange, basement membrane collagen VII [green], nuclear Hoechst 33342 [blue], scale bar=50 μ m. **(c)** mRNA expression in tissue as a function of TINCR loss for transglutaminase1 (TGM1). Data represent independent biologic replicates for duplicate independent TINCR siRNAs. **(d)** Schematic depicting high-throughput assays to analyze the TINCR protein- and RNA-interactome. RIA-Seq, RNA interactome analysis with high throughput sequencing (left side); PMA, Protein microarray (right side). **(e)** Location of the two independent “even” and “odd” probe sets used for the RIA TINCR pull-down. RBP, RNA binding protein.

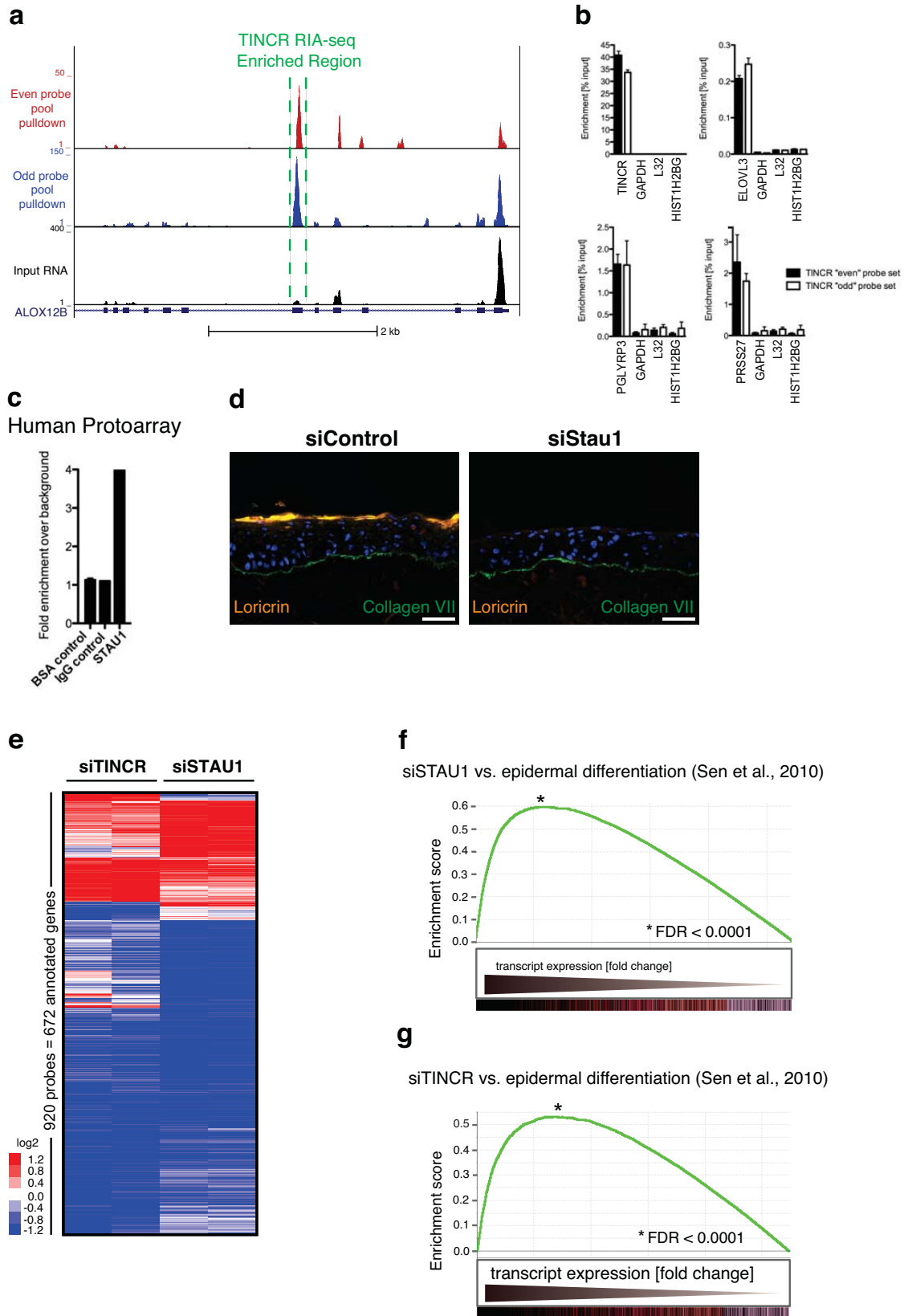


Fig. S3. TINCR interacts with differentiation gene mRNAs and STAU1 protein. (a) Schematic of the RIA-Seq data analysis procedure. Sequencing reads were mapped and detection of enriched sites in the “even” and “odd” samples compared to input

control was performed by scanning each gene using 100 nucleotide sliding windows. This resulted in a total of 3602 TINCR-enriched sites throughout the transcriptome. Depicted here is the ALOX12B locus. **(b)** RNA interactome analysis (RIA)-qRT-PCR of the ELOVL3, PGLYRP3, and PRSS27 epidermal differentiation mRNAs as well as the GAPDH, L32 and HIST1H2BG mRNA controls. Data are shown with s.d.m (n=4). **(c)** Quantified hybridization signal of TINCR protein microarray analysis shown with respect to adjacent protein controls in the same subarray. **(d)** Defective induction of the loricrin differentiation protein in STAU1-deficient tissue; scale bar=50 μ m. **(e)** Heat map depicting transcript profiling of independent biologic replicate organotypic epidermal tissues with siRNA-mediated TINCR- or STAU1-depletion versus control siRNA. Expression changes for each probe are normalized to mean centered signal across all samples. 920 probes passed the filtering criteria of a SAM-FDR < 0.05 and >2-fold change in signal intensity in siControl versus siTINCR or siSTAU1 samples. **(f)** Gene set enrichment analysis (GSEA) shows highly statistically significant overlap of the STAU1i as well as the TINCRi gene set **(g)** with a calcium-induced keratinocyte differentiation gene signature published previously⁷.

Antisense TINCR motif boxes – Yellow
 Sense TINCR motif boxes – Blue
 Probes for TINCR RIA-Seq – Red
 Overlap of motif boxes and probes – Green

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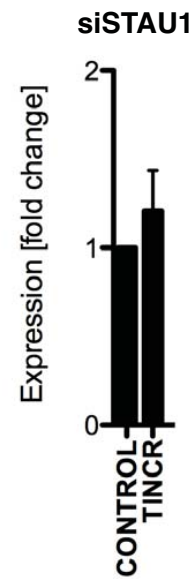
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TGTACTG AATAAAAGATTACATGTTTGAACAA
    
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Fig. S4. The TINCR transcript contains sense and antisense TINCR motif boxes. TINCR sequence with highlighted locations of antisense TINCR motif boxes (yellow), sense TINCR motif boxes (blue), TINCR probes used for RIA-Seq (red), and overlap of motif boxes and probes (green).

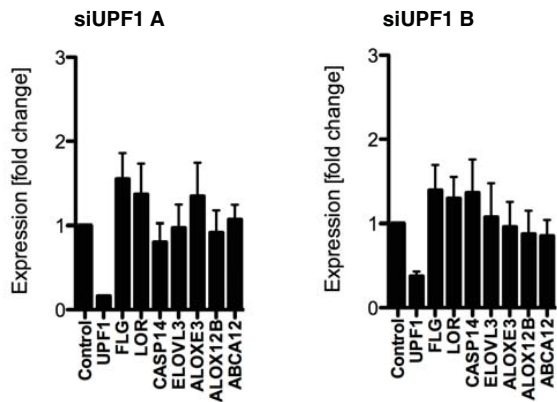
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GeneSymbol	RIA-Seq [Enrichment Score]	siTINCR [fold change]	siSTAU1 [fold change]
DLX3	25.36909237	0.382624192	0.379454813
ATP2C2	12.68454619	0.312299031	0.423079298
PRSS27	11.37661928	0.40584479	0.381564802
SLC31A1	9.659844732	0.475329551	0.460093825
ALOXE3	9.037977717	0.485317235	0.263157789
COTL1	9.037977717	2.33269874	2.111107435
KRT80	7.39218058	0.446582926	0.291587342
ALOX12B	5.747760706	0.418993567	0.07124833
CLDN7	5.422657307	2.848100391	2.124318373
CST6	4.829922366	0.480630464	0.315344352
CASP14	4.293041146	0.06978206	0.162329825
KRT78	4.106758183	0.317537746	0.117684808
PTPN21	3.622535932	0.212274062	0.338212058
PCMTD2	3.622535932	0.475000191	0.446892581
PGLYRP3	3.622535932	0.372677597	0.477641468
KRT1	3.294364069	0.101884042	0.058760888
EPHB6	3.018851937	0.372677597	0.227509706
CPM	3.012580933	0.208049684	0.144686277
LY6G6C	3.012580933	0.353308411	0.150621539
IL22RA1	3.012580933	0.330334601	0.308854659
SEMA4D	2.81864151	0.305448275	0.333787076
RORA	2.77983644	0.40332088	0.132954084
SPTLC3	2.617156143	0.473356816	0.322640623
DGAT2	2.463996147	0.427797513	0.26999414
PDZD2	2.414961183	0.473028823	0.475988954
KCTD4	2.414961183	2.385017745	0.05509251
SNX21	2.414961183	0.431370672	0.460412849
SGPP2	2.259494429	0.412652704	0.48801588
ANXA9	2.243886961	0.218241898	0.098005057
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NEAT1	1.811267966	0.367546834	0.361733721

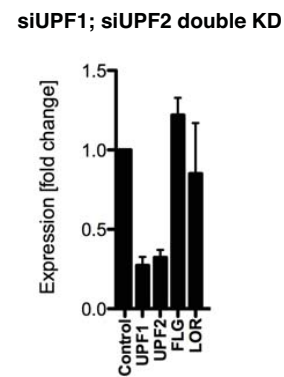
b



c



d



e

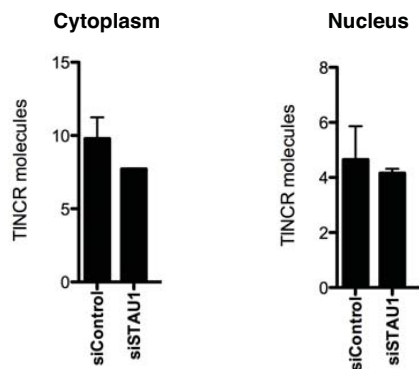


Fig. S5. TINCR controls differentiation gene expression independent of STAU1-mediated RNA decay. **(a)** List of transcripts showing significant enrichment to TINCR by RIA-Seq, as well as differential expression in TINCR- and STAU1- deficient epidermis.

(b) TINCR transcript expression is not altered in STAU1-depleted human epidermal tissue. Data are shown with s.d.m (n=4). **(c)** mRNA expression of genes important for lipid barrier synthesis and differentiation in UPF1-depleted tissue versus control. RNA expression data represent independent biologic replicates for duplicate independent UPF1 siRNAs (UPF1 A, UPF1 B). Data are shown with s.d.m (n=4). **(d)** mRNA expression of differentiation genes in UPF1; UPF2 double-deficient tissue. Data are shown with s.d.m (n=3). **(e)** Single molecule RNA fluorescence in situ hybridization (FISH) analysis showing TINCR abundance in nuclei and cytoplasm of differentiated (day 3) keratinocytes.

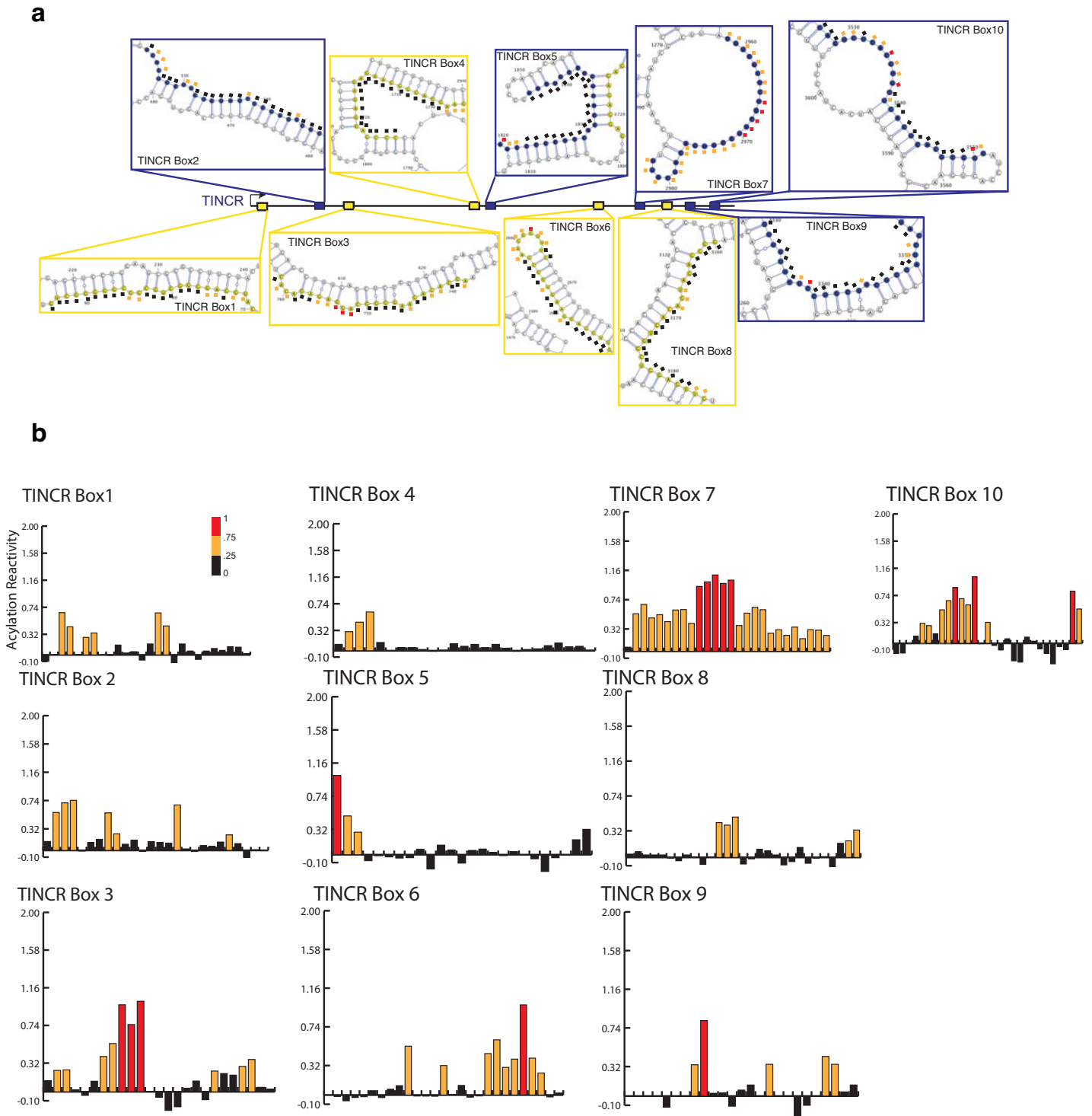


Fig. S6. Structure of TINCR and Acylation Reactivity. **(a)** Primary and Secondary structure representation for TINCR. TINCR boxes are highlighted on the primary sequence as yellow and blue boxes. mFOLD predicted secondary structures for the TINCR boxes are shown within colored insets. **(b)** Normalized acylation reactivities for all 10 TINCR boxes. Acylation reactivity is shown on the Y-axis.

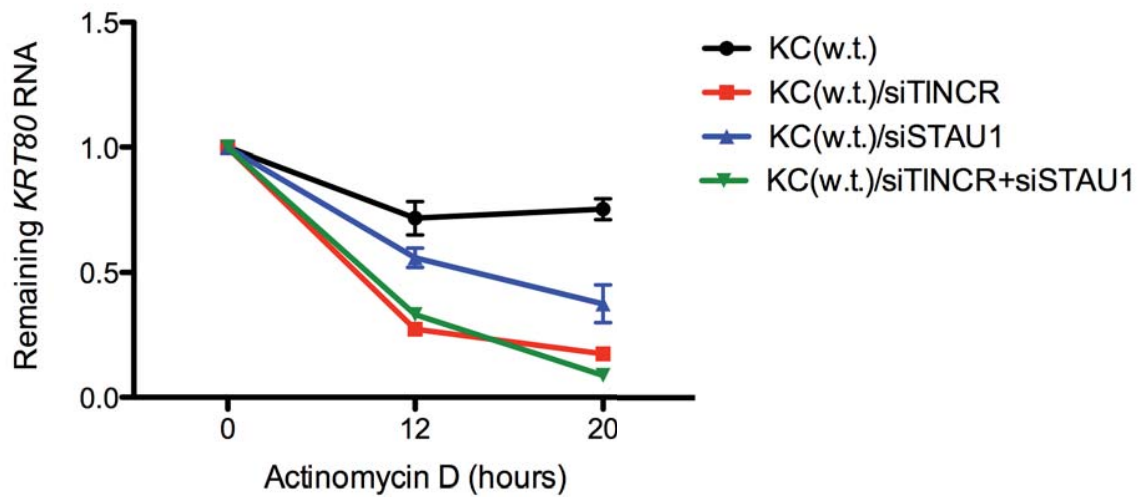


Fig. S7. TINCR and STAU1 control the stability of KRT80 mRNA. (a) RNA stability assays were performed in differentiated keratinocytes using ActinomycinD to disrupt RNA synthesis degradation rates of the differentiation gene mRNA KRT80 over 20h.

Table S1

Gene	fpkm day 0	fpkm day 3	fpkm day 6
NR_027082	44.5161	2.21932	3.49087
NR_033972	1.18455	1.15544	8.75993
NR_033799	29.5149	56.508	61.9139
NR_024437	1	1.47822	7.01719
NR_003138	5.84854	1.48588	2.29609
NR_024357	1	1	8.61481
NR_002987	89.9158	1	1
NR_036515	50.3384	14.6635	67.7472
NR_002826	37.0041	23.4201	14.6984
NR_024282	1	5.78784	4.39737
NR_003558	5.90711	6.14086	13.0361
NR_002473	10.8281	9.4216	27.0754
NR_015368	10.1348	15.3937	20.3459
NR_001434	41.0621	51.7826	100.108
NR_027693	2.61375	21.8804	7.09624
NR_003582	3.91643	2.57484	16.8848
NR_037605	1	5.58292	1
NR_027451	174.803	440.887	348.923
NR_023938	2.0121	7.13371	6.88084
NR_034178	43.8935	77.7932	104.183
NR_033339	13.6523	10.5079	5.62764
NR_026597	1	1	6.9752
NR_002144	66.2732	107.545	141.904
NR_002822	101.285	66.8805	34.9024
NR_033891	1	1	5.21653
NR_003697	91.4925	28.183	46.7231
NR_027775	5.296	1.54365	1.81386
NR_027337	3.49474	1	5.38601
NR_028502	33.1788	11.1404	28.403
NR_024253	5.88271	3.05228	1
NR_033399	19.3039	2.5037	1.06737
NR_015378	4.37973	2.15748	5.68639
NR_003595	3.39158	4.73683	9.02335
NR_033415	2.51258	10.7582	12.5861
NR_024204	4.80195	1	26.9356
NR_015424	1	5.13929	3.04166
NR_033885	23.0194	9.66736	18.0725
NR_028301	15.5339	7.96521	2.45991
NR_027781	22.8528	1	6.82439
NR_026950	6.58237	3.78068	3.29003

NR_024386	10.8825	15.1209	52.6306
NR_003367	13.1109	8.37035	38.4435
NR_034105	20.4937	43.0706	24.0363
NR_026844	7.7844	27.6071	17.6891
NR_026761	27.9523	25.1442	11.8204
NR_003370	6.60361	2.37245	2.73303
NR_034120	6.97097	1	47.5258
NR_004844	2.06714	5.07384	6.64914
NR_033961	31.2597	56.5659	141.645
NR_015379	1.90236	2.28735	415.199
NR_036659	42.0262	252.207	377.761
NR_023917	14.4255	40.7983	45.7277
NR_024374	18.2201	2.91684	1
NR_024271	8.40994	2.47074	4.93525
NR_037596	6.15168	3.65141	2.63748
NR_026854	9.8797	7.9634	3.31347
NR_002775	2.99974	5.92959	8.2819
NR_003563	18.673	6.90342	11.3005
NR_028408	9.11858	13.2854	27.8595
NR_002453	4.75648	4.07579	20.4619
NR_015395	28.6212	12.7348	37.2568
NR_024031	277.094	133.367	250.059
NR_036750	40.227	49.7601	200.386
NR_036461	5.71849	3.77438	11.459
NR_024057	1.25407	1.95299	10.7428
NR_030737	15.8315	40.3702	17.9313
NR_029393	29.2446	859.928	484.041
NR_027033	4.08633	1.65224	6.49594
NR_027003	1	1.75497	11.0367
NR_024344	1	7.01474	3.3599
NR_036521	7.74338	5.34498	19.5926
NR_024063	6.66414	1.61137	43.0339
NR_027064	2.42232	107.693	241.056
NR_001591	33.2051	71.4044	71.524
NR_024151	1	1	5.89128
NR_026999	7.62301	3.29317	4.14155
NR_027028	4.873	1.42925	5.38582
NR_027788	5.14857	2.34809	4.27692
NR_027301	11.6744	10.9589	5.35501
NR_033896	10.711	11.1066	21.5553
NR_024111	56.3771	11.1681	50.7176
NR_003098	428.3	80.7259	192.803
NR_036685	1.28467	5.4718	3.39581

NR_030732	1	53.1117	586.296
NR_036581	1	1	166.668
NR_024089	1	6.3017	1
NR_002821	5.31278	8.33036	20.8535
NR_024451	2.42774	8.5884	22.1274
NR_015441	6.19526	5.1294	24.7861
NR_003615	197.273	206.599	83.738
NR_033360	5.29745	1	1.05669
NR_028503	2.21718	8.91783	77.7609
NR_026966	1.44482	5.66863	1
NR_027392	9.45035	4.33655	4.86147
NR_027358	1	1	40.3152
NR_024480	1	4.83472	5.78638
NR_026752	16.3379	9.88641	5.82389
NR_003505	6.72962	3.10399	4.72359
NR_023383	8.47257	3.76082	10.5428
NR_004845	2.67742	4.24044	5.82364
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NR_027155	2.80227	2.68885	15.1484
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NR_027363	86.3246	59.1684	30.3347
NR_027263	8.91059	10.5551	142.809
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NR_003264	29.3146	10.6665	12.4916
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NR_024387	5.09144	12.3948	15.2583
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NR_026846	12.7088	19.1985	39.8588
NR_026757	49.6545	102.134	87.0966
NR_037178	5.02023	1	1.38812
NR_024333	21.3949	10.9461	10.196
NR_003023	10.7424	1	8.33466
NR_034011	24.756	79.9354	20.2895
NR_003062	1	103.672	1391.34
NR_026829	5.11737	1.94144	1
NR_024056	13.3952	7.55724	1
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NR_027460	1.46437	3.62209	5.04642

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NR_024110	1.27007	32.8808	68.915
NR_033250	5.88538	9.05812	12.301
NR_024607	68.8715	7.74971	5.34836
NR_024618	4.46851	16.9349	12.6094
NR_003531	5.56697	1	1
NR_027512	2.10533	3.296	6.42945
NR_002941	31.4905	22.1468	9.14303
NR_026578	1	4.46561	62.9054
NR_027345	5.15617	1	1
NR_036677	8.2912	4.44424	1
NR_001544	1	5.00635	4.82236
NR_037599	1.61582	5.54682	10.8503
NR_036513	1	7.18701	29.6069
NR_034171	1.66439	3.52608	7.50114
NR_028272	275.68	112.636	773.34
NR_023311	2.41389	1	5.10567
NR_027442	10.6538	7.85868	4.15684
NR_026881	1	5.48687	1
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NR_027789	5.07449	1	3.69846
NR_024187	3.05261	1	5.03183
NR_027350	5.11818	1	1.12466
NR_015370	44.8828	57.5283	138.283
NR_002824	17.523	2.79758	1.52379
NR_024249	8.91684	14.0803	3.77516
NR_002935	1	5.90452	1
NR_027063	97.0256	51.9219	42.3062
NR_003142	16.3074	12.75	152.288
NR_028090	7.64527	15.9639	13.2105
NR_024475	26.4159	3.49506	10.0992
NR_029423	4.22589	7.7701	12.4786
NR_015431	1	1	19.5573
NR_002786	10.3068	10.0023	32.2955
NR_024322	32.356	20.5761	10.3544
NR_024492	1.76607	1.61499	6.82844
NR_024349	3.17956	23.0536	169.517
NR_026905	2.81589	5.28797	13.0832
NR_003284	349.389	229.303	139.905
NR_001446	11.2557	30.1451	31.2935

NR_003281	3.74384	7.63622	4.46152
NR_036650	6.64622	2.0704	2.62256
NR_036496	28.0478	16.6463	5.41699
NR_002196	105.074	5810.32	999.936
NR_034010	72.293	135.649	1
NR_027154	19.3848	19.6647	50.3128
NR_036555	1	1	15.3037
NR_033742	6.75482	25.5844	16.3316
NR_037167	14.9467	11.22	5.20612
NR_036502	9.97188	3.23608	1
NR_002323	82.1778	87.0545	379.531
NR_003579	25.3898	50.9844	33.5993
NR_036455	9.50528	1	1
NR_023915	13.0469	4.53832	2.02103
NR_037177	13.2115	13.7519	4.64769
NR_028597	1.94966	9.77658	1.94164
NR_001545	23.4507	10.484	8.39253
NR_033266	8.01697	1.71304	3.23789
NR_015451	21.6748	45.0426	38.7513
NR_003716	7.67991	3.25423	1.54012
NR_033752	1.56858	1.62437	5.23429
NR_023919	27.999	16.7844	8.3275
NR_023384	7.00356	1.93261	3.2902
NR_024368	17.939	8.42572	14.1154
NR_002308	30.644	68.3444	53.3866
NR_036678	1.02134	1	7.31406
NR_026887	1.25341	5.32528	1.54753
NR_033734	20.9446	6.05365	6.51076
NR_027793	1	2.50605	7.57449
NR_028350	6.38314	6.52372	2.85353
NR_033416	4.66195	3.37521	11.2849
NR_029620	1	1	198.658
NR_026777	6.51446	3.17088	1.62907
NR_003130	116.718	39.1201	62.1734
NR_033849	13.3505	49.3474	16.357
NR_002605	53.4695	39.6043	8.68107
NR_027244	14.367	8.67544	5.20329
NR_033297	8.13175	1.59738	1.09736
NR_024241	11.6077	9.18077	2.2189
NR_026913	6.38211	1.89548	1.96705
NR_015430	4.33309	17.1655	12.6367
NR_027322	1	6.52168	4.86052
NR_015421	1	9.37152	1.26754

NR_037665	46.4144	73.1827	120.241
NR_033928	8.74906	5.40636	1.86819
NR_003110	8.7415	4.18518	7.63575
NR_036512	1.1834	1	8.83537
NR_026967	1.47858	5.73825	1.07094
NR_033374	7.8506	1	1.2811
NR_037629	5.86159	6.49228	1
NR_027156	6.71687	4.02203	1.60393
NR_026792	6.12733	7.41648	12.3718
NR_001459	9.20567	1	1
NR_036447	17.2552	8.32968	12.3185
NR_024586	1.50943	1.42157	27.4768
NR_024034	6.54794	1.73843	2.6459
NR_026984	25.9175	33.2499	7.61001
NR_002305	814.463	917.623	395.514
NR_027712	1.92	2.61776	7.03741
NR_037601	8.4718	6.39564	44.6109
NR_015366	128.274	69.7484	57.5992
NR_001447	34.3719	21.5066	8.48985
NR_002454	8.74735	4.17826	10.4003
NR_003038	2115.5	1624.48	601.524
NR_015389	32.0188	24.5105	12.9614
NR_001588	19.8089	1	1
NR_002924	2.08448	4.02206	9.43404
NR_024116	1	2.83502	8.05082
NR_027238	83.4389	83.0439	207.475
NR_037631	9.5341	21.8449	20.8578
NR_015359	3.12449	5.20747	1
NR_036692	28.1676	9.58713	28.4093
NR_002920	1	52.8337	1
NR_033410	10.4803	16.791	30.6274
NR_034147	1	1.86719	7.32442
NR_033381	32.709	46.9642	87.7486
NR_024206	159.168	80.191	1135.96
NR_003610	13.0022	3.19314	8.28994
NR_028327	7.21729	1.7727	1.56203
NR_003578	7.63905	2.60562	13.7059
NR_003672	10.6282	2.90321	1.39142
NR_026762	13.1481	15.5962	51.9621
NR_002816	6.00819	1.50897	1.61616
NR_028303	6.28008	1	4.20227
NR_036504	2.5373	5.42717	1.98163
NR_024021	1	1	59.1548

NR_024391	8.48919	3.37027	2.92904
NR_026797	1	6.34666	327.055
NR_028504	9.47077	13.9216	124.936

Table S1. Differentially expressed annotated lncRNAs during keratinocyte differentiation. Table of 258 annotated lncRNAs altered during epidermal keratinocyte differentiation in vitro. Annotated non-coding RNAs with a FDR adjusted p-value < 0.05, FPKM > 5 and at least 2-fold change during calcium-induced differentiation in at least 1 out of 3 time points are included. RefSeq IDs as well as FPKM values in undifferentiated (day 0) and differentiated keratinocytes (days 3 and 6) are shown.

Table S2

GeneID	AffyID	Log2_Fold.Change
EPCAM	201839_s_at	1.948131026
CTH	217127_at	1.80717268
FAM195A	1553715_s_at	1.400186103
FAM195A	225861_at	1.323767554
C12orf24	204521_at	1.258590846
ADORA2B	205891_at	1.19579889
FAM169A	213954_at	1.121262727
PITX1	208502_s_at	1.270379171
KLHL23	213610_s_at	1.042063997
GPX2	202831_at	1.525344447
KRT19	201650_at	2.550902025
COTL1	224583_at	1.222331548
TM7SF3	226478_at	1.067591832
CELF2	202157_s_at	1.052016378
DEPDC7	228293_at	1.200105877
MME	203434_s_at	1.020174534
ASNS	205047_s_at	1.471065462
AGPAT9	224480_s_at	1.820873478
ERAP2	227462_at	1.155219393
PITX1	209587_at	1.094600355
SAMD5	228653_at	1.085205814
PHACTR3	227949_at	1.207683363
FST	226847_at	1.293148862
PM20D2	225421_at	1.035765518
GOLSYN	218692_at	1.107644997
NA	221059_s_at	1.172778426
KITLG	226534_at	1.187211259
CBS	212816_s_at	1.525103945
ENTPD3	206191_at	1.010083151
HS6ST2	230030_at	1.278597366
HS6ST2	1552767_a_at	1.126487602
ADAMTS1	222162_s_at	1.345845424
DNAJB4	203810_at	1.185472518
FST	207345_at	1.471866692
IKBIP	236249_at	1.150515066
VGLL3	227399_at	1.10648231
FST	204948_s_at	1.192328877
TAF1A	206613_s_at	1.037007446
CBS	1553972_a_at	1.387367118
PSAT1	223062_s_at	1.176789222
GCHFR	204867_at	1.400110762
NOS1	239132_at	1.283536784
C4orf19	219450_at	1.159157357

LOC148189	235191_at	1.043897988
ASS1	207076_s_at	1.360629825
NA	235921_at	1.169226877
SLC16A9	227506_at	1.10592285
FBXL14	213145_at	1.038101001
NA	236075_s_at	1.134866842
ZNF575	1557119_a_at	1.132162869
NA	1558871_at	1.234450605
NRG1	206343_s_at	1.311250955
UCHL1	201387_s_at	1.006631978
NA	1557051_s_at	1.374715441
AGPS	225114_at	1.317952364
KCTD12	212188_at	1.002823778
CHAC1	219270_at	1.146826483
GPR110	238689_at	1.448289471
CEACAM1	209498_at	1.302797305
FAM73A	235125_x_at	1.090676383
KCTD12	212192_at	1.227847379
TMEM64	225974_at	1.003081887
CBX6	202047_s_at	1.151320308
S100P	204351_at	1.108043208
DNAH14	242283_at	1.066974913
FAM84B	225864_at	1.062591344
NA	239346_at	1.228126019
ANXA1	233011_at	1.313686882
FBXL16	227641_at	1.483070471
ANKRD6	204671_s_at	1.008061142
CLMN	221042_s_at	1.72985803
GCLC	202922_at	1.028581431
C14orf34	1555786_s_at	1.082177173
RAB7L1	218700_s_at	1.026065865
NA	228642_at	1.036576006
PSPH	205194_at	1.188243101
EDN1	218995_s_at	1.072571301
PLAT	201860_s_at	1.034571073
DHRS9	224009_x_at	1.058728436
VGLL1	215729_s_at	1.029710718
UPP1	203234_at	1.086980654
KCTD4	240512_x_at	1.254190266
CLDN7	202790_at	1.509700047
CYP2E1	209975_at	1.023858177
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CELF2	202158_s_at	1.16346847
SLC39A8	209267_s_at	1.14305215
GLUL	217202_s_at	1.003993119
TRNP1	227862_at	1.135904609

DHRS9	219799_s_at	1.09094102
EMP1	201324_at	1.054482704
SEC24D	202375_at	1.008125673
MAL	204777_s_at	2.080315465
UPK1B	210064_s_at	1.171538093
EMP1	201325_s_at	1.114464521
GLUL	200648_s_at	1.062461867
CRTAM	206914_at	1.827606859
EDN1	1564630_at	1.340584513
KCNQ5	244623_at	1.017354977
C9orf64	235940_at	1.050597463
MUC1	213693_s_at	1.310529461
TSPAN1	209114_at	1.143910246
SLC7A11	217678_at	1.076354958
POPDC3	219926_at	1.069865101
GUCY1B3	203817_at	1.244392206
IGFBP7	201163_s_at	1.074713736
NTM	227566_at	1.395810194
C9orf150	227443_at	1.071393127
CRIP1	205081_at	1.087136027
TGFBI	201506_at	-2.264710402
RPTN	1553454_at	-4.627088202
LYNX1	1554179_s_at	-2.076145207
KRT1	205900_at	-3.295155982
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KRT10	213287_s_at	-1.818008338
DSC1	207324_s_at	-1.324979849
CEACAM5	201884_at	-1.283302296
KRT10	210633_x_at	-1.773615324
CD36	209555_s_at	-5.110978369
KRT10	207023_x_at	-1.908409011
FGD2	1553906_s_at	-1.039017257
KRT4	213240_s_at	-1.705170695
DIO2	231240_at	-3.753031404
DIO2	203700_s_at	-3.571556272
RHBG	220510_at	-1.961574233
LMTK3	1557103_a_at	-1.152011905
RFTN1	1569787_at	-3.950212365
PLBD1	218454_at	-1.250103118
KRT77	237120_at	-1.662430236
MAF	229327_s_at	-2.003547184
MYH14	226988_s_at	-1.435239575
KRT9	208188_at	-3.087387122
CD36	228766_at	-4.703289969
AMDHD1	229596_at	-2.05357371
ELF5	220625_s_at	-3.497039292

CPM	243403_x_at	-2.006027826
ZNF107	243312_at	-2.026636558
UPK1A	214624_at	-2.532786996
FRY	204072_s_at	-2.039245538
FNIP2	226460_at	-1.201925351
NA	244417_at	-1.320944269
CD36	206488_s_at	-4.623992994
NFATC2	226991_at	-1.384068537
MAF	206363_at	-2.048728842
CRNN	220090_at	-2.697467604
LOC645638	229566_at	-1.564742212
KRT2	207908_at	-5.4446826
NA	226382_at	-2.237731704
SORT1	224818_at	-1.26569171
SLC30A2	230084_at	-1.505586288
DLX3	231778_at	-1.385847696
PGLYRP4	220944_at	-1.054296364
PTPN21	40524_at	-2.724036112
PADI1	223739_at	-2.494343759
NA	243176_at	-2.236607998
IL1F10	224262_at	-1.414131402
PCSK6	207414_s_at	-1.784641077
PTPN21	205438_at	-2.624899895
SIGLEC15	215856_at	-1.261088165
NA	226959_at	-1.916490981
NA	238431_at	-1.64739826
CPM	235706_at	-2.389512559
PLAC2	229385_s_at	-1.55526871
METTL7A	207761_s_at	-3.059156688
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LOC100129122	231062_at	-1.817606555
ZBTB7C	227782_at	-2.935838409
CTSD	227863_at	-2.145947031
SLC46A2	223816_at	-3.799699973
HIST1H4H	232035_at	-1.36571572
GPRIN2	1554541_a_at	-1.260578343
TGM5	207911_s_at	-2.384157991
AADACL2	240420_at	-3.200436335
SLC19A3	239345_at	-3.710632624
NA	206655_s_at	-1.6146201
GPR68	229055_at	-1.000800531
TP53INP2	224836_at	-1.775270369
POSTN	210809_s_at	-3.027151438
FLJ22536	229280_s_at	-1.5400898
CPM	235019_at	-2.399452847
GADD45G	204121_at	-1.040609237

FNIP2	225924_at	-1.198535842
MXI1	202364_at	-1.410272054
ITGAM	205786_s_at	-4.230373972
GSTT2	205439_at	-2.833838705
KCNE1	236407_at	-1.478918684
SNTB1	226438_at	-1.956400782
PTGER3	213933_at	-3.045377975
DSG1	206642_at	-1.136799459
NA	236423_at	-1.715816406
ZNF662	228538_at	-1.548949878
OASL	205660_at	-1.810529456
PLXDC2	227276_at	-1.611208931
C12orf28	1556267_at	-1.266483847
NA	228442_at	-1.328337553
FA2H	219429_at	-1.176846381
LOC643008	229740_at	-1.08290564
ALOX12B	207381_at	-1.254557563
CREB3L2	228759_at	-1.021041079
ACER1	1553929_at	-2.058408107
IL22RA1	220056_at	-1.597646485
SLC39A2	220413_at	-1.615910066
PDZK1IP1	1553589_a_at	-2.313950164
PCOTH	222277_at	-1.447622194
ACSBG1	206465_at	-4.152206128
RASAL1	219752_at	-1.720586925
ATP2C2	214798_at	-1.341072885
SEMA4D	203528_at	-1.711380998
CPM	206100_at	-2.24754171
CRYAB	209283_at	-1.399656944
LOC100049716	228647_at	-3.200080991
TNFSF10	202687_s_at	-1.250531859
GNG4	205184_at	-2.160183158
SORT1	212807_s_at	-1.145008796
PDZK1IP1	219630_at	-2.342684591
RDH12	242998_at	-1.448808885
NA	226865_at	-1.839369247
GPR1	214605_x_at	-1.389426322
MX2	204994_at	-1.464517851
CD55	1555950_a_at	-1.047324059
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HYAL4	220249_at	-2.565101737
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OVOL1	206604_at	-1.237636959
NA	230710_at	-1.571636767
KRT80	231849_at	-1.163265377

ITPKB	203723_at	-1.271378016
GAS7	210872_x_at	-1.588569036
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CALML3	210020_x_at	-2.656532817
EEF1A2	204540_at	-1.075414286
C5orf46	1554195_a_at	-2.725125189
BEX2	224367_at	-1.453551814
SNX21	1553961_s_at	-1.311410066
SERPINB4	211906_s_at	-2.065593148
ASAP3	222236_s_at	-1.250128129
CASP14	231722_at	-3.840997158
MYH14	232977_x_at	-1.167668705
FHDC1	226599_at	-1.125178709
GPR137B	204137_at	-1.234733174
CAMK1D	235626_at	-1.381352798
NA	239885_at	-1.514673723
NDUFA4L2	218484_at	-1.676112713
NA	214399_s_at	-1.008539173
CSF2RB	205159_at	-1.632336269
NA	243383_at	-1.2463779
MYH14	234290_x_at	-1.223288279
C5orf4	48031_r_at	-1.718179987
CALML5	220414_at	-1.306027929
ETV7	224225_s_at	-2.49894097
CYP4F22	244692_at	-1.287446618
C10orf99	227736_at	-1.88804212
GCNT3	219508_at	-1.233125081
IL20RA	222829_s_at	-1.311578295
NA	226560_at	-1.214669415
CPM	241765_at	-2.281694551
BLMH	202179_at	-2.571112218
HSPA2	211538_s_at	-1.773350534
ELOVL7	227180_at	-1.415260605
ATP2C2	206043_s_at	-2.017407543
CCL5	1555759_a_at	-1.528001093
DIO2	203699_s_at	-2.838097346
ALOXE3	222383_s_at	-1.0475006
CYP4B1	210096_at	-3.908004007
PTPN21	1320_at	-2.234962186
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ATP10B	214070_s_at	-2.486745235
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ATP7A	205197_s_at	-1.073519331
NA	237262_at	-1.154495942
IGFBP3	210095_s_at	-1.610168618
SCNN1A	203453_at	-1.037614886

NA	236201_at	-1.804414764
CXCR2	207008_at	-1.485760112
HSD11B1	205404_at	-2.306783884
CAT	201432_at	-1.041900192
FARP2	204511_at	-1.101789664
ALDOC	202022_at	-1.37435966
ANXA9	210085_s_at	-2.457933546
FNTB	225851_at	-1.05795663
SLURP1	214536_at	-3.018893858
SDR16C5	238017_at	-1.25513713
DGAT2	224327_s_at	-1.227129398
NOD2	220066_at	-1.224470864
KDM3A	212689_s_at	-1.129254754
MYH14	219946_x_at	-1.089271508
GSTA4	202967_at	-1.012533649
C6orf15	221100_at	-2.897261341
SPTLC3	227752_at	-1.07865832
DLX5	213707_s_at	-1.15412871
ELOVL4	219532_at	-1.191312254
ARL5A	226617_at	-1.399978316
FABP4	203980_at	-1.767091039
MIB2	226644_at	-1.015493639
SASH1	213236_at	-1.092895128
C5orf4	220751_s_at	-2.123902164
NA	222315_at	-1.301067942
CAT	211922_s_at	-1.18515738
DEGS2	236496_at	-1.647178858
SGPP2	244780_at	-1.542125317
ALDH5A1	203608_at	-2.272355129
VSIG10L	238654_at	-1.040744957
CAMK1D	220246_at	-1.447724691
TLE3	206472_s_at	-1.001003329
EXPH5	214734_at	-1.234562104
RUNDC3A	206196_s_at	-1.713698377
TGM3	206004_at	-2.882986456
SRPK1	202199_s_at	-1.10884575
ARL5A	218150_at	-1.245618667
TUG1	212337_at	-1.129064477
SLC26A9	242271_at	-1.686819076
FLVCR2	219316_s_at	-1.290736377
NA	230085_at	-1.017812818
MAMDC2	228885_at	-1.018046624
EPHA4	227449_at	-1.350550057
PGLYRP3	1553059_at	-1.424018841
KCTD11	235857_at	-1.163204243
NA	239652_at	-1.891325192

NEAT1	214657_s_at	-1.415460202
MAP4K5	203553_s_at	-1.013277323
NA	230053_at	-1.36403315
KIAA0513	204546_at	-1.371762196
C1orf96	225904_at	-1.234634088
DIO2	210819_x_at	-1.250199235
MFAP3L	210492_at	-1.530435277
CCDC90A	227451_s_at	-1.065128418
PRICKLE1	226065_at	-1.081032822
PYDC1	243722_at	-3.320201904
MAF	209348_s_at	-1.470981799
PRSS23	226279_at	-1.205666029
NA	238752_at	-3.277100666
SASH1	41644_at	-1.016316884
NYNRIN	220911_s_at	-1.043147378
NFE2L3	236471_at	-1.571919525
PRICKLE1	226069_at	-1.03033813
AMACR	209426_s_at	-1.366157363
MFAP3L	210843_s_at	-1.221512535
ANXA9	211712_s_at	-1.934276507
NFE2L3	204702_s_at	-1.878973393
BLNK	207655_s_at	-1.204624579
SCPEP1	218217_at	-1.134440974
MAP1LC3A	227219_x_at	-1.479274205
CSNK2A2	203575_at	-1.440251206
TSHZ2	235616_at	-1.103584793
NA	210387_at	-1.384856816
MFAP3L	205442_at	-1.529082243
SLC45A4	225597_at	-2.384647889
ITPR1	203710_at	-1.308029291
FLG	215704_at	-1.081818065
FLG2	1569410_at	-1.311064374
TM7SF2	210130_s_at	-1.223088291
MUC15	227241_at	-1.659155363
LY6G6C	207114_at	-1.501389361
BCO2	232449_at	-1.251977543
LOC100132815	227234_at	-1.381130697
CXCL14	222484_s_at	-1.051978871
GCNT1	205505_at	-2.109806893
ASAP3	219103_at	-1.430514056
NLRX1	1553695_a_at	-1.294074625
FAM43A	227410_at	-1.295230148
PSAPL1	1564333_a_at	-2.50878595
GAS7	202192_s_at	-1.656977649
AMACR	209425_at	-1.579302862
NA	230278_at	-1.534166867

LOC283404	1558195_at	-1.194938904
VIPR1	205019_s_at	-1.23638281
SPRR4	1552620_at	-1.496595484
AKD1	1564002_a_at	-1.134165773
ID4	209291_at	-1.677659041
RORA	235567_at	-1.316793034
DOCK9	215237_at	-1.709943443
GAS7	207704_s_at	-1.518535441
ABHD12	228124_at	-1.111208191
SLC23A1	223732_at	-2.569410032
C17orf67	236863_at	-1.197012299
PTPRO	211600_at	-1.15765525
MMP9	203936_s_at	-1.591400427
WDR62	215218_s_at	-1.046374464
DGAT2	226064_s_at	-1.223097206
PSORS1C1	220362_at	-1.088508501
ETFDH	33494_at	-1.311143659
EPHA4	229374_at	-1.332413786
CYP26B1	219825_at	-1.989657989
GAS7	202191_s_at	-1.685470976
PRSS27	232074_at	-1.30101392
ALOXE3	207708_at	-1.039303743
ST3GAL6	210942_s_at	-1.078545876
GGT6	236225_at	-1.039285107
NA	236297_at	-1.419568059
SCNN1B	205464_at	-1.150460999
CGN	223232_s_at	-1.041151833
NCOA1	209106_at	-1.116188659
NA	227995_at	-1.830350274
NEAT1	224566_at	-1.472103473
ZNF91	206059_at	-1.50358971
STARD5	213820_s_at	-1.073478797
NA	238755_at	-1.386795422
SH3RF2	243582_at	-1.186845846
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GCNT1	239761_at	-2.25143172
MGLL	225102_at	-1.064613314
SH3BGRL2	225354_s_at	-1.331291335
EPHA4	228948_at	-1.35974407
PCSK5	205560_at	-1.229807116
MAP1LC3A	224378_x_at	-1.451600896
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NA	217521_at	-2.344028826
DUSP2	204794_at	-1.444796795
DIO2	211215_x_at	-1.713677463

ASPHD2	227014_at	-1.006780824
CIDEA	221295_at	-1.130566711
MUC15	227238_at	-1.38652644
KRT78	1553213_a_at	-1.654530809
ETFDH	205530_at	-1.30534157
GAS7	211067_s_at	-1.684858852
C3orf57	238702_at	-1.449936346
FNTB	1773_at	-1.012357341
CTSA	200661_at	-1.106074485
RARRES1	206392_s_at	-1.558223958
DBP	209782_s_at	-1.269507792
C5orf13	201310_s_at	-1.193575793
ABCG4	207593_at	-1.342229809
LOC284242	1560250_s_at	-1.273528584
MAP1LC3A	232011_s_at	-1.54001589
MGLL	211026_s_at	-1.145662473
SGK2	220357_s_at	-1.430011752
EGLN3	222847_s_at	-2.492852315
SLC45A4	225598_at	-1.949022488
ABCA12	215465_at	-1.102065898
PRR24	227325_at	-1.04501114
KLF4	220266_s_at	-1.262184591
NA	232782_at	-1.269356104
FLVCR2	222866_s_at	-1.327818573
BST2	201641_at	-1.845166166
OASL	210797_s_at	-1.377508999
PDPN	226658_at	-1.207560569
RASGRP1	205590_at	-1.414916104
NA	214807_at	-1.505346445
RASEF	1553186_x_at	-1.013976405
RUNDC3A	213439_x_at	-1.615146286
NA	221577_x_at	-2.053126354
SMPD1	209420_s_at	-1.1424455
SNX21	1553960_at	-1.11379616
APOB	205108_s_at	-1.605934046
PCSK5	205559_s_at	-1.070058686
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PDZD2	209493_at	-1.079631125
IL1F8	231755_at	-2.087436065
SMAP2	225282_at	-1.076699849
LIN7B	219760_at	-1.036736346
SGPP2	238567_at	-1.01109468
ETV7	221680_s_at	-1.108082918
HSDL2	209513_s_at	-1.179029472
LOR	207720_at	-2.695454511
EPHA4	206114_at	-1.228362529

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RBBP6	228814_at	-1.362700967
AMACR	209424_s_at	-1.054560177
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RORA	210426_x_at	-1.308160343
NA	241300_at	-1.085306623
GRHL1	1552685_a_at	-1.199990127
CHRNA9	221107_at	-2.267117074
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PTPN21	226380_at	-1.36162119
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MFAP3L	210493_s_at	-1.638816609
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KRT13	207935_s_at	-1.465357464
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SEMA4G	219194_at	-1.031543171
EPHB6	204718_at	-1.424084369
VASN	225867_at	-1.032510602
ATP13A4	1557136_at	-1.21665703
PDPN	204879_at	-1.072547605
RARRES1	206391_at	-1.087096227
SH3RF2	235768_at	-1.00673287
LOC402778	1564573_at	-1.096835189
XAF1	228617_at	-1.059764695
RND2	213467_at	-1.607432326
NA	228567_at	-1.517815383
RARRES1	221872_at	-1.374412134
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ABHD12B	237974_at	-1.584559359
NA	236480_at	-1.379993345
ACOT8	236514_at	-1.115166432
SH3GL3	205637_s_at	-1.158344984
SLC37A2	238638_at	-1.656943605
ARHGAP26	205068_s_at	-1.121722418
LOC154761	227868_at	-1.081847083
LIN7B	241957_x_at	-1.008828333
FZD10	219764_at	-1.521821275
ANKH	223094_s_at	-1.182985652
PDPN	221898_at	-1.168312014
FMO2	211726_s_at	-1.069565841
FNIP2	225922_at	-1.033995549
EPST11	227609_at	-1.240491395
HPGD	211548_s_at	-1.256663503
PERP	236009_at	-1.004143632
ELOVL3	234513_at	-2.767116737

POU2F3	207109_at	-1.150417909
JMY	241985_at	-1.308310994
IL20RA	219115_s_at	-1.212585458
NA	1561530_at	-2.167496362
ARG1	206177_s_at	-1.912077738
HPGD	211549_s_at	-1.551787401
POR	208928_at	-1.014167398
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IDE	203328_x_at	-1.104311898
LPXN	216250_s_at	-1.071497083
LOC643923	1564787_at	-1.061012276
KAZALD1	221000_s_at	-1.100987459
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S100A12	205863_at	-1.034896999
DNASE1L2	207192_at	-1.897454935
ANKH	223092_at	-1.177703272
APCDD1	225016_at	-1.276384234
H19	224646_x_at	-1.592368933
FRMPD1	206774_at	-1.768038923
IDE	217496_s_at	-1.118333757
HSDL2	209512_at	-1.274481968
CENPM	218741_at	-1.125295919
CLU	208791_at	-1.412253879
SLC31A1	236217_at	-1.072876615
PCMTD2	212406_s_at	-1.073923054
OTUB2	222878_s_at	-1.036113713
NA	231439_at	-1.00288869
HPGD	203914_x_at	-1.124392597
GAN	220124_at	-1.262738591
DEGS1	207431_s_at	-1.018034878
FABP7	205030_at	-1.569491084
VWF	202112_at	-1.447037207
SLC13A5	228844_at	-1.337169641
NA	238455_at	-1.376671917
CYP4B1	1555497_a_at	-1.48635794
BPIL2	1555773_at	-1.109188607
TREX2	211788_s_at	-1.342618968
FOXN3	218031_s_at	-1.071441008
NCOA1	209105_at	-1.156302057
H19	224997_x_at	-1.705840466
ABHD5	213805_at	-1.10852452
USP2	207213_s_at	-1.127267938
NDRG2	214279_s_at	-1.093645917
FRMD3	230645_at	-1.028358534
ENDOU	206605_at	-1.195072873
PTGS1	205128_x_at	-1.027668728

FABP7	205029_s_at	-1.601341916
CST6	206595_at	-1.056667836
ACPP	204393_s_at	-1.424798819
NA	212913_at	-1.484535056
DAPL1	229290_at	-1.337300415
CTSH	202295_s_at	-1.166545885
GLRX	209276_s_at	-1.17376518
GBP2	202748_at	-1.172709475

Table S2. Differentially expressed genes in TINCR-deficient human epidermis. Table shows differentially expressed transcripts based on Affymetrix transcript profiling of TINCR-deficient versus normal human epidermal tissue. 557 probes passed the filtering criteria of a SAM-FDR < 0.05 and greater than 2-fold change in signal intensity in siControl versus siTINCR samples. Expression changes for each probe are normalized to mean centered signal across all samples. Columns 1 and 2 show gene symbols and Affymetrix probe identifiers (Affy ID); column 3 (Log2_Fold.Change) indicates average expression changes based on independent biological replicates (siControl A+B; siTINCR A+B).

Table S3**TINCR probes**

>TINCR_1
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>TINCR_2
ttgtagtagaaggcgcgctt
>TINCR_3
attccttcagccagtacca
>TINCR_4
caggagaagtccttccaaa
>TINCR_5
tgaagcagtgatcagct
>TINCR_6
aatgcctaggccttctca
>TINCR_7
aacctcaaagtcacacagca
>TINCR_8
tgtccttcttcttgcgat
>TINCR_9
agggctgtcactgcacaaa
>TINCR_10
tagcattggagagttcgga
>TINCR_11
aggatattgggggtggaaat
>TINCR_12
atttaaggggaagggggaaa
>TINCR_13
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>TINCR_14
ttatttctcccagcctctg
>TINCR_15
ttactatccacctgtccatg
>TINCR_16
taagcaaacgcacagtctgg
>TINCR_17
agttggcagatgctctgaa
>TINCR_18
agtcattctgcaaagcagct
>TINCR_19
acaaagtcctgggttaggca
>TINCR_20
aacagacagcagcagactct
>TINCR_21
tctagatacacgcatgtggc
>TINCR_22


```
cctgaatatgcacagggaaa
>TINCR_23
aaatgccccatttcttgcc
>TINCR_24
aaagatgtgcacaagtcctg
>TINCR_25
ctgagcagtgaggctgtcaa
>TINCR_26
agccaaaagccatctgtaa
>TINCR_27
gttggggacgcctcagttca
>TINCR_28
aaaatgctttctcccacctc
>TINCR_29
gggacaggtccaacattatt
>TINCR_30
ggtcttgacaaatgatgtg
>TINCR_31
ggaagccactttgcaactt
>TINCR_32
ttggtgatggtgacattca
>TINCR_33
tcaaagcagctctgacaact
>TINCR_34
ttccacaatagttccccttg
>TINCR_35
tccagatccaaaatcagcag
>TINCR_36
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>TINCR_37
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>TINCR_38
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Table S3. Table of biotinylated probes complementary to TINCR RNA for RIA-Seq.

Table S4

GeneID	AffyID	Log2_Fold.Change
KRT13	207935_s_at	1,932541279
HNMT	204112_s_at	1,841071434
GABRP	205044_at	3,230175685
NA	208596_s_at	1,176475318
IFI44L	204439_at	1,348831747
VGLL1	215729_s_at	1,329214586
USP18	219211_at	1,1647593
CYP1B1	202437_s_at	1,917962837
GALNT5	236129_at	2,013465056
DCN	201893_x_at	1,358936311
NA	215125_s_at	1,529643926
SAMHD1	204502_at	1,136244433
CDC25B	201853_s_at	1,252062441
SLC39A8	209267_s_at	1,339606067
L1CAM	204584_at	1,258130932
IFIT1	203153_at	1,076375018
NFKBIZ	223217_s_at	1,004037191
SERPINA3	202376_at	1,482895208
GAS1	204457_s_at	1,072415697
EPCAM	201839_s_at	1,083931751
MFI2	223723_at	1,670397923
DNER	226281_at	1,004305591
KRT24	220267_at	1,67053189
DEPDC1	235545_at	1,444343881
MYLK	224823_at	1,981379137
DPP4	203717_at	1,290643741
RARRES1	221872_at	1,136702509
GCNT2	230788_at	1,949031511
RARRES1	206392_s_at	1,264294721
HOTAIR	239153_at	1,136009522
SLC39A8	219869_s_at	1,369731457
BID	204493_at	1,121169933
NHEDC2	229491_at	1,030359929
GOLM1	217771_at	1,041408642
RARRES1	206391_at	1,169862019
NEFL	221805_at	1,00616681
GXYLT2	235371_at	1,242928928
IL8	202859_x_at	1,310725194
GAL	214240_at	1,308987608
NA	206094_x_at	1,188756854
CYP1B1	202436_s_at	1,185938794
EMP1	213895_at	1,422159715
CCND1	208712_at	1,06404397

KRT31	206677_at	1,399733342
KLRG2	244264_at	1,558297051
PKIB	231120_x_at	1,42981872
KRT19	201650_at	2,396142317
NA	214456_x_at	1,131099822
COPZ2	219561_at	1,000401148
KRT7	209016_s_at	1,166150664
AP1S3	1555731_a_at	1,154097573
GTSE1	215942_s_at	1,318788433
MYCN	209757_s_at	1,626365639
CCNA2	213226_at	1,048096341
BHLHE41	221530_s_at	1,703364162
GUCY1A3	229530_at	1,369686402
GALNT5	229555_at	1,387599289
ANLN	222608_s_at	1,058936815
TRIM2	215945_s_at	1,081104087
QDPR	209123_at	1,07629306
PFAS	213302_at	1,002912871
WNT5B	221029_s_at	1,223142011
PLXNC1	213241_at	1,657788729
SNX10	218404_at	1,034414242
MLANA	206426_at	1,041480703
MLANA	206427_s_at	1,120666127
GUCY1A3	221942_s_at	1,308829555
GUCY1A3	227235_at	1,102191808
IPW	221974_at	1,159493008
CCNA2	203418_at	1,15192445
CDKN3	1555758_a_at	1,341938057
FBLN1	202995_s_at	1,084595319
MYLK	202555_s_at	1,051111692
FAH	202862_at	1,104613534
AURKA	204092_s_at	1,000288654
EFEMP1	201843_s_at	1,366112037
CTGF	209101_at	1,919676311
PAPSS2	203060_s_at	1,062761554
ANLN	1552619_a_at	1,015174627
NA	208607_s_at	1,21349766
PTHLH	206300_s_at	1,090769451
CEP55	218542_at	1,027397205
IL8	211506_s_at	1,486576839
LRAT	220317_at	1,151015721
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KIF14	206364_at	1,130198033
PKIB	223551_at	1,186336899
CCNB1	228729_at	1,311694786
DPP4	203716_s_at	1,390430968

UBE2S	202779_s_at	1,076050404
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PTHLH	211756_at	1,068721048
CDCA3	221436_s_at	1,098817344
NEIL3	219502_at	1,000201173
KIF20A	218755_at	1,149541529
CDC6	203968_s_at	1,140850133
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PEG10	212094_at	1,015548101
LMNB1	203276_at	1,0011208
SPARC	212667_at	1,133525217
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DEPDC1	232278_s_at	1,177507513
DSG4	1561330_at	1,105897993
AURKA	208079_s_at	1,053005778
THBS2	203083_at	1,16166739
GTSE1	204318_s_at	1,171529448
CLDN7	202790_at	1,087471468
TPM2	204083_s_at	1,004805038
GNG11	204115_at	1,096768887
CXCL11	211122_s_at	1,332131031
CXCL1	204470_at	1,230774038
CMPK2	226702_at	1,024170941
NA	221059_s_at	1,037246019
GSTM3	202554_s_at	1,039449326
ADORA2B	205891_at	1,497898883
COTL1	224583_at	1,078218301
BUB1B	203755_at	1,077160167
DKK1	204602_at	1,156139715
CCNB1	214710_s_at	1,032592994
NA	227051_at	1,111896617
PBK	219148_at	1,055538009
POPDC3	219926_at	1,205182312
NRG1	206343_s_at	1,038871974
FANCD2	242560_at	1,09595528
DLGAP5	203764_at	1,079581384
DEPDC1	222958_s_at	1,000144937
SLITRK6	232176_at	1,049223979
APOBEC3G	204205_at	1,120006108
HMMR	207165_at	1,074450156
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CDKN3	209714_s_at	1,020571554
PAPPA	224941_at	1,182330416
KIF4A	218355_at	1,075407574
CELF2	202158_s_at	1,01238389

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CDC6	203967_at	1,005711841
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ARG1	206177_s_at	-8,370676674
LOR	207720_at	-8,881187086
LCE1B	1560531_at	-6,77860731
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GPX3	214091_s_at	-3,449737582
GPX3	201348_at	-3,542892976
RFTN1	1569787_at	-3,764176943
NA	217521_at	-5,138342823
LCE3D	224328_s_at	-3,770430716
AMDHD1	229596_at	-3,045520772
CYFIP2	215785_s_at	-2,570385242
RNASE7	234700_s_at	-4,138376263
CARD18	231733_at	-2,190127351
ELMOD1	231930_at	-5,297231768
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PAQR5	242871_at	-1,641953697
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EGF	206254_at	-1,275542143
GK	215977_x_at	-1,14895462
SORT1	224818_at	-1,090956911
KIAA1370	225327_at	-1,03900251
C6orf105	229070_at	-1,248078608
SNX21	1553960_at	-1,11901031
GCNT1	239761_at	-1,475026981
HOMER2	217080_s_at	-1,364593527
NA	241300_at	-1,098091
C5orf4	48031_r_at	-1,107783683
GK	207387_s_at	-1,515926616
SLC37A2	238638_at	-1,128012811
PCOTH	222277_at	-1,007075505
SNTB1	226438_at	-1,229746472
SLC31A1	236217_at	-1,120495459
NA	239885_at	-1,130262606
DSG1	206642_at	-1,191805422
NDRG2	214279_s_at	-1,239158096
OASL	205660_at	-1,16253169

KCNK7	224055_x_at	-1,071804522
TGM2	201042_at	-1,582246853
LRRC20	218550_s_at	-1,059049555
C3orf57	238702_at	-1,525586254
G0S2	213524_s_at	-1,087107964
CST6	231248_at	-1,186401732
NA	221861_at	-1,008956556
IL1F8	231755_at	-1,768471588
PGLYRP3	1553059_at	-1,065966016
GK	214681_at	-1,125921459
KIAA1644	221901_at	-1,11178254
MALAT1	224559_at	-1,116926464
NELL2	203413_at	-1,213629687
PRR9	237732_at	-1,473874367

Table S4. Differentially expressed genes in STAU1-deficient human epidermis. Table shows differentially expressed transcripts based on Affymetrix transcript profiling of STAU1-deficient versus normal human epidermal tissue. 609 probes passed the filtering criteria of a SAM-FDR < 0.05 and greater than 2-fold change in signal intensity in siControl versus siTINCR samples. Expression changes for each probe are normalized to mean centered signal across all samples. Columns 1 and 2 show gene symbols and Affymetrix probe identifiers (Affy ID); column 3 (Log2_Fold.Change) indicates average expression changes based on independent biological replicates (siControl A+B; siSTAU1 A+B).

TINCR box motifs

>TINCR BOX 1 (antisense - yellow)
CATGGAGGGGCTGCGGCGGGGGCTG

>TINCR BOX 2 (sense - blue)
ACACTCCTGCTGGAGCCCCAGTCCC

>TINCR BOX 3 (antisense)
AGCACAGAAGGGGCAGGAGAGACAC

>TINCR BOX 4 (antisense)
GAAGGAGGGGAAGAGAGAGGAGCCC

>TINCR BOX 5 (sense)
ATCCCCCTCCACCTCTCCCCTTGGT

>TINCR BOX 6 (antisense)
GGTGGAGGAAGTGGGGAAGGGTTTC

>TINCR BOX 7 (sense)
TTTTCTTTCTTCCTTCACATCATT

>TINCR BOX 8 (antisense)
GGGGAGATGACAGTGGCTGGAGTTG

>TINCR BOX 9 (sense)
GTTTTTCTCCTGCTACTCCATCCAT

>TINCR BOX 10 (sense)
CAGTCTCACCTTCTGACTCACTCGG

Table S5. Table depicting the 10 TINCR box motifs present in the TINCR transcript.

miR ID	number of sites in TINCR	% of sites in background	% of sites in RIA-seq target set
miR-15	4	15.5%	15.5%
miR-28	4	10.0%	9.7%
miR-186	4	16.9%	18.0%
miR-766	4	15.7%	14.5%

Table S6. RIA-seq targets do not have significantly more miRNA binding sites than background. We searched for potential M2-8 7-mer miRNA binding sites in full length TINCR (As a non-coding RNA, TINCR does not have a well defined 3' UTR). Of eight miRNA seeds that have four or more binding sites in TINCR, only four of them (miR-15, miR-28, miR-186, and miR-766) are expressed in keratinocytes. For each of the four miRNA seeds, we then searched for their binding sites in RIA-seq targets, and compared the number of binding sites to that in 3' UTRs of all RefSeq genes.

miR ID	number of sites in TINCR	% of sites in background	% of sites in down-regulated genes upon TINCR knockdown	% of sites in up-regulated genes upon TINCR knockdown
miR-15	4	15.5%	15.8%	17.9%
miR-28	4	10.0%	11.8%	7.7%
miR-186	4	16.9%	15.8%	21.8%
miR-766	4	15.7%	15.5%	19.2%

Table S7. Down-regulated or up-regulated genes upon TINCR knock down do not have significantly more miRNA binding sites than background controls. The percentage of miRNA binding sites is not significantly different from what is observed in the background set.

Table S8

GeneSymbol	RIA-seq-EnrichmentScore	siTINCR_fold_change	siSTAU_fold_change
DSG4	0	2,473607488	2,152328062
PTGER3	0	0,121129488	0,034990508
ARHGEF10L	0,402623091	0,502103521	0,471308453
ITGAM	0	0,053275869	0,159807498
LYPD6B	0,315096332	0,4886567	0,655062214
UGCG	2,409950998	0,809032461	0,456269542
L1CAM	0	1,858990463	2,391856656
TGM1	3,623607817	0,738771819	0,368579773
SH3RF2	0	0,46755586	0,746302074
EDN1	0	2,307895509	1,645592273
PDPN	0,044735899	0,450789746	0,764563504
PLCXD1	0,645522589	0,611424787	0,413211888
PAQR7	3,019673181	0,526907482	0,4465587
CREB3L2	0,376554843	0,492760638	0,551703568
BLNK	0,376554843	0,433882235	0,525510967
PDZK1IP1	0	0,199116216	0,359697956
SOX7	3,012438747	0,605118016	0,479223187
BID	0	1,640215556	2,175232985
C9orf64	0	2,071387494	1,429049474
GGH	0,04645651	0,550974548	0,402049796
CRTAM	0	3,549477968	0,635880101
CXCL14	0,345105506	0,482306156	0,599474683
SEC24D	0,241573854	2,011296357	0,94956547
SGPP2	2,25932906	0,412764271	0,488156598
AP1S3	0	1,711578745	2,225450749
DBP	0,301967318	0,414801268	0,569614194
HSPB8	0,334486875	0,597749034	0,246752331
PCMTD2	3,623607817	0,475025526	0,446985166
DNAH14	0	2,095035824	1,358319767
KLK6	1,204975499	0,591488988	0,22947031
SLC23A1	0	0,168473078	0,430728052
FRMD3	0	0,490267647	0,944365809
ANXA1	0,174140662	2,485759777	1,222016029
PLA2G3	0	0,640969066	0,327902332
HMOX1	0	0,62673076	0,082331519
C1orf96	1,506219374	0,424950266	0,544940667
CITED2	3,012438747	0,653655143	0,282852922
GUCY1A3	0	1,208767365	2,395349085
KRT9	0	0,117653234	0,164059961
CALML5	0,695178172	0,404432845	0,298115414
TREX2	0	0,394304214	0,082842087
S100P	0,690211013	2,155530847	0,612836897
ERAP2	0	2,227181901	1,482805246
C15orf48	0	0,898979094	0,360090085
PFAS	0	1,430564209	2,004042176

CCNB1	0	1,519348328	2,2534632
PADI1	7,247215635	0,177471128	0,493349866
ALOXE3	9,037316241	0,485181965	0,263119935
IKBIP	0	2,219931355	1,411379601
HOTAIR	6,024877494	1,627643234	2,197722941
COTL1	9,037316241	2,333234882	2,1114269
UPK1A	1,004146249	0,172804537	0,533492423
SIGLEC15	0	0,417229142	0,777789343
ABHD5	1,207869272	0,458991326	0,447602933
C12orf28	0	0,415671619	0,566155183
DOCK9	2,612368426	0,305672052	0,497457554
C17orf67	0	0,436177634	0,652380975
TAF1A	0	2,051966882	1,630313112
MYH14	0	0,426652375	0,847100367
KCNE1	0,430348392	0,358757604	0,737683702
GADD45G	0	0,486122146	0,587467333
DEPDC7	0	2,297565318	1,82343254
GDA	0	0,53498732	0,346561936
AQP9	0,374855981	0,563583395	0,42053154
SEMA4D	2,818361636	0,305367621	0,333864882
TUG1	0,87845038	0,457212111	0,950153878
GOLM1	0	1,613758838	2,058236326
FABP7	0	0,333228454	0,072115285
PRR24	0	0,484641166	0,535198733
UBE2S	0	1,569684052	2,108256502
LMNB1	0	1,302026606	2,001554363
ATP2C2	12,68262736	0,312247037	0,423103023
SERPINA12	0	0,23042987	0,107320832
AAACL2	0,167357708	0,108785914	0,033177724
TPRG1	0,430348392	0,604539904	0,13633659
GK	0,603934636	0,793578	0,416503089
KRT80	7,394167834	0,446500787	0,2916612
MGLL	0	0,464858038	0,388228919
SRPK1	0,100655773	0,463664845	0,563171643
SASH1	1,028925677	0,48142868	0,489836554
RORA	2,78071269	0,403266307	0,132954559
AKD1	0	0,455598287	0,579592821
PIK3C2B	19,32590836	0,710202755	0,453694194
ENDOU	0	0,436764386	0,323884549
KIAA1199	0	0,419285014	0,14536725
FRY	0,402623091	0,243290933	0,151480298
KCTD4	2,415738545	2,385332307	0,055106543
TMEM184A	0	0,703847447	0,496462917
BST2	0	0,278323346	1,951838514
CYP4F22	0,645522589	0,40967546	0,062644158
SLC31A1	9,662954179	0,475370205	0,459935844
PTPN22	0	1,126163015	0,372784324
NGEF	0	0,71493406	0,497789105

CMPK2	0	0,559004902	2,03379031
SCPEP1	0,805246182	0,455511387	0,729945036
CDC25B	0	1,400131517	2,381816783
CLN8	0	0,626562637	0,486866655
TGM2	0	0,635751375	0,333961372
CDCA3	0	1,191605867	2,141790463
GPR137B	0	0,424921081	0,558301273
HNMT	0	1,668795935	3,582760074
BLMH	0	0,168274419	0,168292274
FOXN3	1,66082025	0,475843474	0,799329777
PAPSS2	0	1,454263601	2,088926243
BCO2	0	0,419872282	0,257452326
ENTPD3	0,603934636	2,014027177	1,161489882
ASPRV1	0,201311545	0,517050713	0,024587822
KIAA0513	0	0,386418964	0,344625079
KIAA1644	0	0,686647499	0,462721956
RAB7L1	0,603934636	2,03646337	1,352786768
NOS1	0	2,434350297	1,67880781
TMEM86A	0	0,578246835	0,408922883
KRT1	3,294188925	0,101873027	0,058753704
PHACTR3	0,042134975	2,309664597	1,564435115
ABCG1	0,345105506	0,837527993	0,363247062
FNIP2	1,506219374	0,452246451	0,542092981
TCHH	0	0,720266207	0,302843468
WFDC5	1,811803909	0,652580963	0,195922443
EPN3	1,907162009	0,750646692	0,458787229
AADAC	0	0,216296227	0,084841402
TLE3	3,623607817	0,499652394	0,532621758
SP6	0,172552753	0,528289369	0,442870052
HOMER2	0,805246182	0,511469193	0,388343836
CD55	0,480802332	0,483864815	0,43603309
POSTN	0	0,122669506	0,835697118
ID4	0	0,312589443	0,509746052
ANKH	4,518658121	0,441246132	0,663123177
ADAMTS1	0,690211013	2,541791026	1,369712847
ALDOC	5,636723271	0,385723872	0,694346921
VGLL3	2,657312399	2,153199969	1,61189109
RASGRP1	0,402623091	0,375031556	0,20672161
PLXDC2	0,026841539	0,327323949	0,32774461
YOD1	0,007596662	0,8322797	0,272801092
IPW	0	2,037109752	2,23378914
LOC148189	0	2,061790845	1,02197474
SAMHD1	0	1,227407218	2,198080821
ANLN	0,226475489	1,349521986	2,052035544
FAM73A	0,092913021	2,129738623	1,310291794
UCHL1	0	2,009215038	1,425992909
KRT4	0,603934636	0,306684956	0,559953189
EPHX3	0,543541173	0,602391525	0,307454065

BIRC5	0	1,475299629	2,135501275
TMEM45A	0,154196077	0,649645915	0,460451507
PSORS1C1	0,603934636	0,470247278	0,65948686
ELOVL3	0	0,146897654	0,090962448
PLAT	0	2,048504515	2,232268839
ETFDH	0,052516055	0,403812475	0,511111173
ANKRD6	4,83147709	2,011206395	1,881983836
SLC15A1	0,055785903	0,539628317	0,266842681
CARD18	0	0,594381084	0,219132086
STARD5	1,807463248	0,475171826	0,795510659
RFTN1	0	0,064694534	0,073598647
KLK13	0,805246182	0,761093939	0,484992862
KRT13	0,049384242	0,362145797	3,817270119
DPP4	0,017505352	0,766717686	2,532456265
KLHL23	0	2,059171508	1,147325348
MND1	0	1,540100623	2,255004234
APPL2	0,010412666	0,51144306	0,482832725
MIB2	0	0,494659044	0,662791333
FARP2	0	0,465938141	0,591408897
MYLK	0	1,175750313	2,860456519
MXI1	0,058920452	0,376240731	0,570672147
SPNS2	1,207869272	0,812279837	0,201866563
ANKRD35	2,415738545	0,507463438	0,428767263
LCE3D	0,483147709	0,964769622	0,073280303
CLCN5	1,12966453	0,817060265	0,495612291
LCE1B	0	0,809473643	0,009108269
IL1R2	0	0,682955501	0,295823327
EXPH5	1,204975499	0,42497147	0,30493301
SERPINB4	0,391861951	0,238888093	0,212047435
FBXL14	0	2,05352285	1,474624628
JMY	0,988256677	0,403793336	0,280609482
GAN	0,25882913	0,41675211	0,463031731
ACSBG1	0	0,056242084	0,160506277
TTC39A	1,610492363	0,975275061	0,440137678
C2orf54	0	0,545897256	0,473867411
IL1F5	0	0,567389907	0,455907124
C6orf15	0	0,134226242	0,436124386
QDPR	0	1,477660154	2,108611133
SLCO2A1	0	0,493553302	0,107002084
PM20D2	0	2,050201229	1,816322873
GSTA4	0,033551924	0,495674983	0,507041793
RNASE7	0,301967318	1,206054268	0,067996231
IFI44L	0,603934636	0,613097295	2,547057885
FLG2	0,468248881	0,403023432	0,009432314
C5orf13	0,251639432	0,43721785	0,854851612
CEACAM5	0	0,410853996	0,515046612
C9orf150	2,013115454	2,101461648	1,555516867
PSAT1	0,177202279	2,260730817	1,129454857

LOC645638	0	0,338038105	0,486832973
GDPD3	0	0,625427547	0,256100397
PTPN21	3,623607817	0,212218179	0,338105575
TRIM2	0,028521116	0,787909512	2,115654561
NAP1L5	0,301243875	0,671778987	0,406038695
SLC37A2	0,12049755	0,317110245	0,457545521
RASAL1	0	0,303425255	0,524103404
IFIT1	0,190716201	0,631872272	2,108730925
CALML3	0,603934636	0,158600276	0,140959235
LOC100049716	0	0,108812712	0,310997577
TNFSF10	0,805246182	0,420293235	0,889548086
SORT1	0,602487749	0,433664047	0,433805262
PLIN2	0,306220379	0,597516361	0,494423516
CRYAB	2,357560759	0,379019257	0,6003858
KIAA1370	0,013725787	0,885399223	0,48666384
NEIL3	0,024157385	1,600933604	2,000278904
IL1F10	0	0,375235596	0,22883218
C1orf46	0	1,009042345	0,054370001
MUC1	0	2,480325499	1,351906961
KLRG2	0	1,472208365	2,94506005
NFE2L3	2,013115454	0,302404925	0,378798305
CEP55	1,811803909	1,691841087	2,038343515
PTHLH	0	1,546819804	2,113662818
ITPKB	1,811803909	0,414263892	0,750778159
CD36	0,150983659	0,035580885	0,032476484
AZGP1	0,24425179	0,746430094	0,069703194
TTC39B	0,602487749	0,826633792	0,443204793
CLU	3,012438747	0,394666784	0,971505459
SEC14L1	0	0,948825929	0,492337126
DUSP2	0	0,367343895	0,646667177
GLUL	1,207869272	2,046597634	1,659649831
DEGS1	6,34131368	0,493788493	0,57012441
COPZ2	0	1,326785165	2,000556187
RDH12	0,695178172	0,366323743	0,162203728
RNF39	1,949225072	0,848444814	0,257329959
CST6	4,83147709	0,480741137	0,315318001
ASS1	0,753109687	2,567972628	1,255111503
NLRP10	0,187134676	1,057796137	0,385710716
KCTD11	5,23410018	0,446519708	0,633984445
GABRP	0	1,217997118	9,383822246
DLX3	25,36525472	0,382664588	0,379576479
HSPC159	0	0,638949305	0,46444297
GALNT5	0	1,245593674	3,250208281
CXCR2	0	0,357060361	0,212597981
CPEB4	0,686289359	0,622856206	0,456568434
ESYT3	0	0,87146158	0,121296164
DGAT2	2,464722611	0,427763917	0,26998628
HELLS	0	1,446058454	2,017481659

PLBD1	0,201311545	0,420418157	0,236101654
SLC30A1	0,027576924	0,518032442	0,391952802
PAQR5	0,201311545	0,569863535	0,320422265
HYAL4	0	0,168976938	0,197251053
APOB	0	0,328522925	0,091378006
DLX5	0,603934636	0,449337474	0,447320722
SMPD3	0	0,572291902	0,158716025
POF1B	0,523902391	0,55761439	0,362843118
RASSF5	0,753109687	0,744478126	0,466409198
IGFBP7	0	2,106304092	1,825532359
THBS2	1,204975499	1,666451261	2,23715837
RASL11B	0	1,231209162	2,29960559
DIO2	0	0,162069852	0,104062171
DEGS2	0	0,319263857	0,21482319
PRSS23	0,127144134	0,433569137	0,953024495
ABHD12	0	0,462906206	0,399049373
SLC5A10	0	0,685272722	0,335405959
ASNS	1,095432272	2,772265559	0,883534865
HAL	0,35862366	0,4503108	0,008094196
MPZL3	0,627591406	0,524713125	0,332966872
ATP7A	1,207869272	0,475158476	0,413783203
MYCN	0	0,802136371	3,087342712
IL22RA1	3,012438747	0,330415556	0,308825848
STX19	0	0,635927705	0,485438962
CASZ1	2,409950998	0,59066472	0,471077985
MAL	0	4,22899679	0,604852912
CXCL1	0	1,41124288	2,34692874
NCOA1	0,063572067	0,454942034	0,587041778
CDC6	0	1,664277045	2,104213346
BPIL2	0	0,463554668	0,120110942
FAH	0	1,369089034	2,150412656
WDR62	0	0,484183404	0,576276622
AMDHD1	0	0,240886641	0,121117499
PAPPA	0	0,895993777	2,645826432
NEAT1	1,811803909	0,367602418	0,361724521
EPHA4	0,537935491	0,401155196	0,75943224
VSIG10L	0,683699588	0,486076416	0,192640765
IL1F8	0	0,235298485	0,293519532
CRNN	0	0,154163421	0,085261967
KIAA1239	6,024877494	0,63792858	0,305542779
SLC45A4	0	0,222698664	0,488696003
LPXN	0	0,47582498	1,111590826
KCNQ5	0,402623091	2,024204399	1,45540379
CXCL11	0	1,062523864	2,517743007
ABHD12B	0,092913021	0,333426492	0,055037626
AGPS	0	2,493120068	1,455614425
C15orf62	0	0,686815157	0,300107773
ATP13A4	0,51765826	0,430278593	0,453149714

TP53INP2	0,376554843	0,292139559	0,416111636
SLC26A9	0,658837785	0,310611021	0,443826666
LRMP	0	0,401530944	0,264670348
PDZD2	2,415738545	0,473149785	0,475843692
TNFRSF11A	0	0,663325142	0,404639435
C6orf105	0	0,604780548	0,421008537
PKIB	0	2,243787693	2,476114124
SEMA4G	0	0,489186613	0,562677065
PSG4	2,664849661	0,823657291	0,370283249
PLXNC1	0	1,236342682	3,155325257
STAU1	2,409950998	0,909417564	0,29088942
SNX10	0	1,36161901	2,048281842
PCSK6	0,805246182	0,29024818	0,306768667
RASEF	0	0,495179534	0,950522224
FAM43A	0	0,407471159	0,394750053
GSTM3	0	1,221116274	2,055442945
CAMK1D	0,377459148	0,375129664	0,306028714
TSHZ2	1,207869272	0,46535874	0,747517997
LYPD5	1,506219374	0,759833247	0,188697747
GGCT	0,460140675	0,566381482	0,279496341
AURKA	0	1,501866177	2,037284153
NFATC2	0	0,383136788	0,186601598
CLDN7	5,422389745	2,847508299	2,125012707
CELF2	0	2,155081491	2,017241611
GLRX	0	0,443262991	0,149751355
METTL7A	0,753109687	0,119978126	0,140868922
KIF14	0,054903149	1,449702921	2,188887842
KRT15	0,753109687	1,893736744	2,509621411
PERP	1,207869272	0,498565987	0,826577182
C10orf99	1,207869272	0,270173463	0,184403126
GNG11	0	1,732259517	2,13875153
CEBPA	0	0,769418339	0,438637081
VASN	0	0,488858688	0,331444157
C3orf57	0	0,366037574	0,347338382
BUB1B	0,603934636	1,450731992	2,109878859
VGLL1	0	2,041614835	2,512658466
SLC39A2	0,185826042	0,326259074	0,292851138
CBX6	0	2,221170759	1,668990739
ALOX12B	5,746529569	0,419122081	0,071249422
IL1F7	0	0,56571009	0,151606439
DKK1	0	1,995504258	2,228603116
LOC283404	0	0,436804946	0,221604726
ELOVL7	0,433594098	0,374942013	0,252950546
PLAGL1	6,777987181	0,472736933	0,493340833
LY6G6C	3,012438747	0,353213071	0,15058679
KRT7	0	1,507905753	2,244121308
ADORA2B	0	2,29071645	2,824310848
C5orf4	0,020825332	0,264063888	0,429934914

DLGAP5	0	1,383516125	2,113422756
NHEDC2	0	1,494684691	2,042533767
FAM195A	0	2,570371391	1,867830601
TGM5	0	0,191556516	0,254009778
FAM169A	0,301967318	2,175372899	1,541147704
SPINK5	0,603934636	0,595986457	0,460249032
MUC15	0,14891539	0,347999973	0,307732495
ANXA9	2,243185792	0,218226011	0,098033085
SORCS2	0	0,532312313	0,438300334
GUCY1B3	0,603934636	2,369187216	1,255555494
PTPRO	0	0,44824045	0,858135455
KLF4	0,645522589	0,416912175	0,512545854
RBBP6	1,537288165	0,388853609	0,347526714
PLAC2	466,9280058	0,340265147	0,749962477
ASAP3	0,334715416	0,394932748	0,622434321
FILIP1L	0,381947851	0,526512913	0,416894112
EMP1	0,245074925	2,12060161	2,679863866
LOC402778	0	0,467541007	0,570591228
CYP26B1	2,013115454	0,251798573	0,326567756
TSPAN1	0	2,209791488	1,933797545
APCDD1	7,229852993	0,412828869	0,745768153
GAS1	0	0,88774095	2,102951674
LYNX1	0	0,317389546	0,069009161
TM7SF2	0,073474116	0,428364761	0,245370053
NKPD1	1,004146249	0,551146206	0,447856879
KRT19	1,207869272	5,860005527	5,263937345
FMO2	0	0,476462362	0,259317806
RPTN	1,506219374	0,04046762	0,016080807
CDSN	13,55597436	0,647731852	0,105075545
LRRC20	0	0,682962935	0,479948145
CRIP1	0	2,124518678	1,06777169
KAZALD1	0	0,466197296	0,571956812
CARD14	0	0,481341232	0,475951174
NDUFA4L2	2,415738545	0,312924666	0,599734782
SLC19A3	0	0,076381517	0,127977884
DNASE1L2	0	0,268416463	0,254276093
TMEM64	0	2,004276969	1,853477456
SLC13A5	0	0,39579639	0,630487566
POU2F3	0,201311545	0,450494717	0,241383548
ARG2	0,603934636	0,842750672	0,420208288
SLC39A8	0	2,208477524	2,557383928
EPS8L1	4,518658121	0,762619057	0,44532062
FBXL16	0	2,795430489	1,501880352
ADAP2	1,207869272	0,546417326	0,252116994
MAPK14	0,483147709	0,61686628	0,49275674
C4orf19	0	2,233269497	0,834916629
SLC46A2	0	0,071808579	0,050406248
CCL5	0	0,34675748	0,87169655

PITX1	0	2,269681345	0,442980796
ATP6V1C2	0,502073125	0,566345139	0,159965335
FHDC1	0	0,45844523	0,505043417
MAP1LC3A	0	0,355939267	0,387249709
ZNF107	1,506219374	0,245426586	0,506041298
KRT24	1,834171858	1,300058087	3,18331934
CCDC90A	1,004146249	0,477930115	0,608433614
SMPD1	0	0,452991065	0,648272398
TM7SF3	0,201311545	2,095931885	1,400234726
NDRG2	0,177202279	0,468575713	0,423619793
FBLN1	0,241573854	1,179135718	2,120780513
PSORS1C2	0,402623091	0,4943948	0,133304567
SDR9C7	0	0,540462698	0,196246882
NTM	0	2,631362836	1,444823712
MAP3K8	0,502073125	0,85338166	0,377344684
FA2H	0	0,442317313	0,307593591
GRHL1	0,207063304	0,435278261	0,624699207
LMTK3	0	0,449997252	1,073982586
SLC16A9	0	2,152365146	1,513003623
ELOVL1	3,220984726	0,695088981	0,46290495
FLG	1,022043231	0,472433094	0,033702833
EGR2	0	0,406049721	0,250292832
GAS7	1,207869272	0,323787144	0,205221469
EGF	0	0,636518882	0,413069904
LOC643923	0	0,479295641	0,588655967
FST	0	2,495129699	2,197025607
BEX2	0	0,365121413	0,49177799
PAWR	0,037165208	0,657093235	0,484674033
LOC284242	0	0,413646826	0,190414979
SH3GL3	0	0,448026203	0,264422396
KRT77	0,571078435	0,315906552	0,141561418
ZNF575	0	2,191870965	1,268504385
CAT	0,483147709	0,462162213	0,698350889
MLANA	0,241573854	1,330565737	2,115609583
HMMR	0,452950977	1,732034559	2,105919305
PCOTH	0	0,366625187	0,49755382
KIF4A	0	1,337476771	2,107317324
ANKRD22	0,278739063	0,600144982	0,42275315
C14orf34	1,342076969	2,117228784	1,466522934
GBAP1	0,751111985	0,73956952	0,485751934
ELF5	0,51765826	0,088569925	0,076343752
RARRES1	0	0,395045088	2,281980425
ATP12A	2,008292498	0,890872722	0,414631781
TPM2	0,602487749	1,383501135	2,006672302
IL8	0	1,150456564	2,636549379
UPK1B	0,603934636	2,252517155	1,978161387
DNAJB4	0	2,274378739	1,505337232
DUOXA1	1,506219374	0,639065003	0,490677631

SCNN1A	1,305804619	0,487132152	0,184710758
NDRG4	0	0,531302481	0,198451488
ZRANB1	0,223679495	0,539263885	0,496625958
HSPA2	0,502073125	0,292528575	0,501288752
AVPI1	0,814959275	0,620686133	0,340001697
FABP4	0	0,293800542	0,468019439
FNTB	0,603934636	0,48796278	0,679400137
GCNT3	0	0,425394982	0,995222422
C5orf46	0	0,151236137	0,17748188
HIST1H4H	1,811803909	0,388041883	0,496282686
LOC100129122	0	0,283691228	0,384400262
NFKBIZ	0,753109687	1,919786693	2,005604574
NYNRIN	1,691016981	0,48526766	0,943252897
CYB561D1	0,905901954	0,521848408	0,476834649
MAF	2,008292498	0,279111613	0,707348104
TMPRSS13	0,690211013	0,63316266	0,366517017
HS6ST2	0	2,301449018	1,164884577
ETV7	0	0,286476372	0,494783086
FRMPD1	0	0,293607571	0,471021491
UPP1	0,623263189	2,124289886	0,786264083
APOBEC3G	0	1,454649276	2,173478927
FGD3	0	0,615795896	0,451932739
SLC5A1	0,20082925	0,634230966	0,465339129
ASPHD2	0	0,49765546	0,776876166
EPHB6	3,019673181	0,372655803	0,227442657
ST3GAL6	0,226475489	0,47350584	0,468368041
XAF1	0	0,479710294	1,880038044
FLJ22536	0	0,34386405	0,562276107
TNNT2	0,602487749	0,628460159	0,295800996
SDR16C5	0,097935346	0,418953743	0,33267954
HS3ST6	0	0,453270817	0,106642058
CASP14	4,293187523	0,069782198	0,162310023
PCSK5	0	0,45064619	0,828369577
MXD1	1,12966453	1,133058377	0,478602048
LOR	0	0,154378686	0,002120783
SH3BGRL2	0,268415394	0,397412365	0,379354824
KRT10	3,824919363	0,280613394	0,535324037
C12orf24	0,502073125	2,392619274	1,792711282
EGLN3	0,073204198	0,177654691	0,382357896
WFDC12	0,016109298	0,840332849	0,167199589
XKRX	0	0,560290064	0,291848335
ITPR1	0	0,403872189	0,512179323
ARG1	0,092913021	0,265709601	0,003021171
RND2	0,603934636	0,328181922	0,705420914
DUSP1	2,628891946	0,755426707	0,477180981
GPX3	7,531096868	0,574308249	0,088614385
KIF20A	0	1,318670256	2,21843384
TCP11L2	0,238089616	0,716477441	0,356727695

MALAT1	1,213967853	1,00170275	0,46107506
CPM	3,012438747	0,208071908	0,144673915
NEFL	0	1,90539184	2,008567311
CBS	0,452950977	2,743914506	1,151552755
SLURP1	0	0,123373645	0,059388269
CIDEA	0	0,456736278	0,212436261
ULK3	0	0,631545435	0,431533706
GNG4	0	0,223727862	0,941798404
H19	6,024877494	0,318837958	1,11125454
IL20RA	0,07549183	0,416941859	0,583205405
CHRNA9	0	0,207744606	0,110939469
PPP2R2C	0	0,667718209	0,329844356
GBP2	0	0,443587472	0,429488559
CGN	0	0,48593935	0,537566384
TGM3	0	0,135560949	0,204885415
TCEA3	1,207869272	0,829446158	0,345775402
SPRR2G	0,847248398	1,168628608	0,093002132
VWF	0	0,366773877	0,590823601
OVOL1	0,520948054	0,424066681	0,616216079
S100A7	3,623607817	0,822876742	0,465882553
LCE2B	0	0,706986741	0,003994526
03. Mär	0,044735899	0,505451901	0,107733207
CTSA	0,376554843	0,464556352	0,526969097
CCND1	4,658924336	1,688013737	2,090783921
CYP2E1	0	2,03334945	1,020052113
SGK2	0	0,371127869	0,645397055
HPSE	0	0,556963424	0,267817768
SBSN	3,892023211	0,769368285	0,485115428
SPINK7	0	0,726310537	0,290136388
CTH	0	3,499557905	0,797612912
SPRR4	0,939453879	0,354388702	0,160250132
USP18	3,623607817	0,76661199	2,241958075
PRSS8	0,172552753	0,81350068	0,469992139
SNTB1	0	0,257670489	0,42639237
GCNT2	0	1,879164466	3,861152432
C9orf169	1,509836591	0,626454037	0,306877436
HSD11B1	0	0,202110491	0,278958835
KITLG	0,268415394	2,277121481	1,486343501
C1orf210	0	0,844906586	0,423560075
EREG	0,127144134	1,116756528	0,439083168
CNFN	1,095432272	0,765338085	0,102643115
SPARC	0	1,179594153	2,193941742
VIPR1	4,518658121	0,424435487	0,675171393
KCTD12	0	2,166453961	1,133826206
IGFBP3	0,448773564	0,327560064	1,10653729
GSTT2	0,161380647	0,140258615	0,24873816
CTSH	0	0,445486653	0,189917206
SCNN1B	0	0,450481262	0,404357267

GPT2	0,345105506	0,508859891	0,440465671
USP2	0	0,457781816	0,137159015
ZNF662	0,154389305	0,341758736	0,169061475
GPRIN2	0	0,41737661	0,607127884
CSNK2A2	0,13727569	0,368503134	0,370886503
CEACAM1	0	2,467067698	1,360513325
ABCG4	0	0,394410589	0,378369939
PTGS1	0	0,490502118	0,419044495
IDE	0,690211013	0,462869425	0,310548902
DCN	0,177627834	1,178392811	2,56495997
NOD2	4,518658121	0,427954445	0,580223491
KCNK7	0	0,729486276	0,475723592
GPR1	0,547716136	0,381716559	0,479001644
CLMN	0	3,316951758	1,675882096
GPR68	0	0,499722634	0,736716716
LOC100130476	0	0,447388687	0,359357508
GPX2	0	2,878554341	1,818235271
S100A12	0,056179966	0,488050723	0,615668382
EPST11	1,207869272	0,423228476	1,253096579
ARHGAP26	3,012438747	0,459544852	0,686265775
PRSS27	11,38032416	0,405840875	0,381512002
CYB5A	0	0,704689541	0,408923255
RBP7	0	0,701180325	0,336395486
PRICKLE1	0	0,481068594	0,900292056
WNT5B	0	1,021776662	2,334545992
PEG10	0	1,730783215	2,021670809
DSC1	0,504256104	0,399154768	0,191672809
ZNF91	0,143449464	0,352674774	0,327760781
KLK12	0	0,931832069	0,445142242
HSDL2	0,658837785	0,427277212	0,411967249
DSG1	0,320851464	0,454767336	0,437754701
GXYLT2	1,207869272	0,912554933	2,366785444
BSPRY	0	0,664061948	0,498962711
BCL6	7,247215635	0,486981122	0,668932977
ACPP	0,215690942	0,386714332	0,256226483
G0S2	0	0,949143018	0,470704006
HPGD	0	0,40305599	0,036780564
CTSD	0,602487749	0,225946477	0,327846208
POR	1,147475809	0,495113984	0,450664233
RAET1E	0,4016585	0,552344916	0,417328288
LOC100132815	0	0,383917786	0,389865334
FAM89A	0,013458153	0,663614497	0,491940622
MFAP3L	0,105541975	0,358498338	0,245483011
PSAPL1	0	0,175703404	0,080168121
SLC7A11	1,090028368	2,108701604	1,002046111
SERPINB3	0,307888246	0,630385193	0,438645009
DNER	0	1,184138923	2,005977732
GCHFR	0	2,639218437	0,979687034

ZBTB7C	0,483147709	0,130684649	0,314585445
PSG1	0,677798718	0,964469411	0,462912498
GOLSYN	0	2,154935962	1,249820912
MME	0,172552753	2,028164307	0,650562847
LRAT	0	1,344624258	2,220701866
AMACR	0,134207697	0,396848392	0,912366807
MAMDC2	0	0,493784473	1,209801428
LASS3	0	0,564961395	0,395180752
POPDC3	0	2,099237069	2,30566404
SERPINA3	0	0,768144219	2,795090911
PGLYRP4	0,463452115	0,481532019	0,502482329
MFI2	0	1,906314931	3,183023753
FZD10	0	0,348246009	0,520439309
KRT31	0	1,700727376	2,638528089
KDM3A	0,738142333	0,457151813	0,644740611
SPTLC3	2,61705009	0,473468936	0,32262841
GGT6	0	0,486568521	0,448573143
KRT79	0,158549408	0,144263886	0,525706271
NRG1	0,215174196	2,481566224	2,054620542
CCNA2	0,061417082	1,506518716	2,143562371
LCE1E	0	0,919451793	0,149550212
IGFL2	0,430348392	0,963154616	0,39682622
TGFBI	0,265803419	0,208091451	1,212754182
NELL2	0	0,538649976	0,431182435
OTUB2	0,201311545	0,487639294	0,314576893
GTSE1	0	1,41010888	2,370446678
ARRDC4	0	1,398716256	0,445668878
ABCA12	0,805246182	0,465848935	0,341183083
TRNP1	1,204975499	2,197563128	1,187886296
GABARAPL2	1,207869272	0,950629455	0,400157847
TRIM25	0,523902391	0,492771148	0,710180841
CYFIP2	0	0,293016411	0,168359234
RUNDC3A	0	0,315470644	0,45133213
CDKN3	0	1,473708619	2,267739313
FAM3D	0	0,213206418	0,451473487
LIN7B	0	0,492166259	0,601692832
ACOT8	0,402623091	0,461637897	0,666026852
BHLHE41	0	0,913283204	3,25659466
PBK	0	1,558070004	2,078493173
GAL	0	1,831328602	2,477676114
KRT78	4,106755526	0,317641032	0,117669811
SMAP2	0,402623091	0,474112111	0,513513481
SLC30A2	0	0,352187037	0,627842037
SLITRK6	0	0,677940994	2,069416416
MAP4K5	0,765063809	0,49541954	0,746820532
PRR9	0	1,126924341	0,360014179
GCNT1	0	0,22058104	0,378716184
PGLYRP3	3,623607817	0,37267273	0,47765272

EGR3	1,207869272	0,660009761	0,236106729
OASL	0	0,331247339	0,446727914
DAPL1	0,056838467	0,395760514	1,229734401
ATP10B	0,568409069	0,178408316	0,138542538
ARL5A	0,334715416	0,399758747	0,370178835
AMPD3	0,241573854	0,964251055	0,4445475
ALDH3B2	0,430348392	0,60014662	0,364526628
SAMD5	0	2,121678138	1,394157935
GCLC	0,126404924	2,040017363	1,656789769
ALDH5A1	0	0,206991707	0,270923463
CTGF	0	1,183759543	3,783381636
PYDC1	0	0,100119722	0,106429146
CENPM	0	0,458407986	0,788959734
ELOVL4	0,334715416	0,437904368	0,266480571
SOX2	0	0,702883721	0,45920054
FLVCR2	1,506219374	0,40352292	0,210688487
CYP4B1	0,502073125	0,154194053	0,2850449
CYP1B1	0	1,407778137	2,93213355
CSF2RB	0	0,322565429	0,399467485
ELMOD1	0	0,511531602	0,025431639
GPR110	0,301967318	2,728843147	1,854006413
SLC16A10	0	0,446482381	0,097740107
CHAC1	0	2,214262837	0,76215098
EPCAM	0	3,858743174	2,119805283
C1orf68	0	1,127520384	0,363518215
FCHSD1	1,207869272	0,983594308	0,199049018
ZNF846	0,109806297	1,281960839	0,367685023
SNX21	2,415738545	0,431489359	0,460409558
RHBG	0	0,256748146	0,623052613
NLRX1	0,603934636	0,407797652	0,525254466
PSG7	1,204975499	1,001883956	0,293078068
SLC22A3	0	0,511622352	0,403270836
DHRS9	0	2,106480744	0,164056274
FGD2	0	0,486658866	0,508546729
MX2	0	0,362356618	1,611498661
FAM84B	0	2,088679804	1,645859722
LOC154761	0	0,472423592	0,702868205
EFEMP1	0,089471798	1,952762272	2,577749437
LOC643008	0	0,472077085	0,35065759
FANCD2	1,207869272	1,491688103	2,137545722
HOPX	0,167357708	0,93668651	0,355695767
DUOX1	7,093807372	0,525027552	0,49220181
MMP9	0	0,331849171	0,844622299
PSPH	0,402623091	2,278750702	1,303392196
DEPDC1	0	1,667295476	2,309102332
ACER1	0,603934636	0,240080793	0,138956465
GRAMD1C	1,207869272	0,796396787	0,27627007
AGPAT9	0	3,532950359	0,918039395

EEF1A2	0	0,474534773	0,769997691
KRT2	0	0,022960811	0,005251152
CRCT1	0,309913826	1,182332375	0,45836249

Table S8. Differentially expressed genes in STAU1- and TINCR- deficient human epidermis. Table shows differentially expressed transcripts based on Affymetrix transcript profiling of STAU1- and TINCR- deficient versus normal human epidermal tissue. Enrichment scores based on RNA interactome analysis with high throughput sequencing (RIA-Seq) are included for all 672 genes showing differential expression in STAU1- or TINCR- deficient tissue.