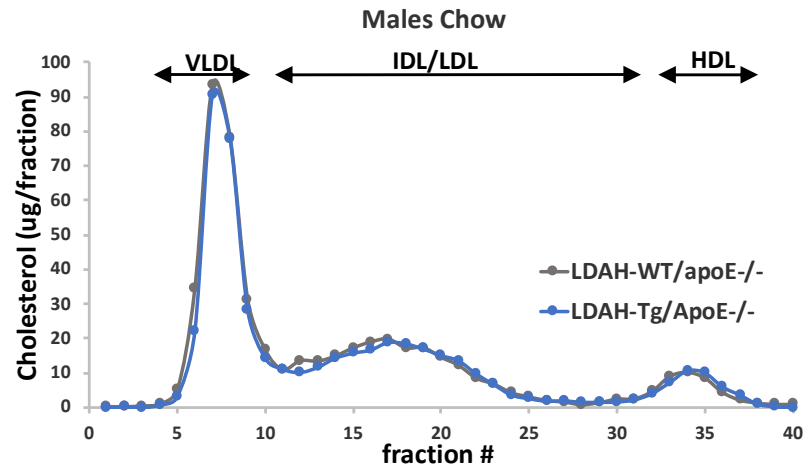


(A)



(B)

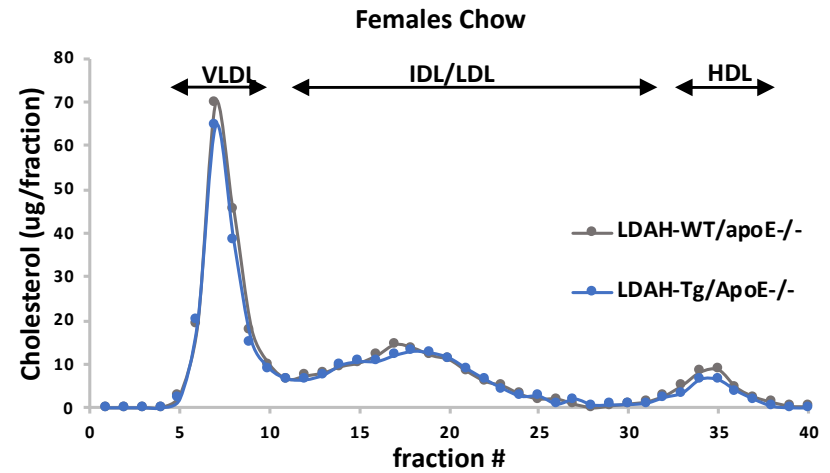
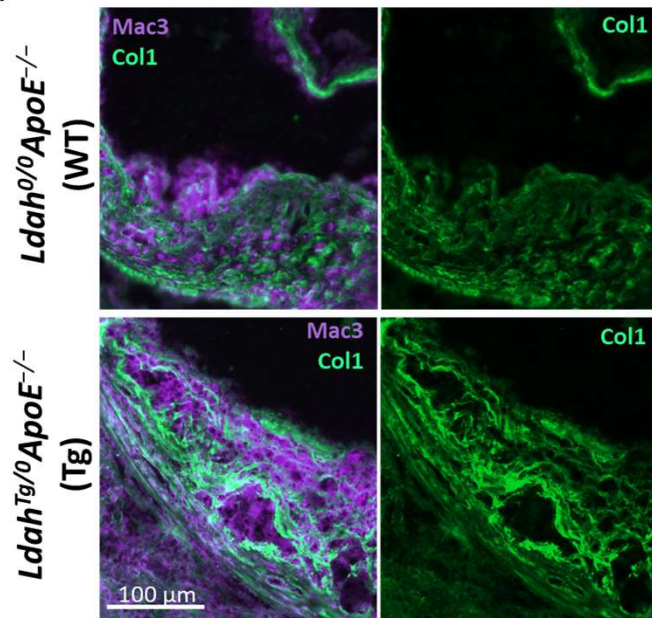


Figure S1. Cholesterol distribution in FPLC fractions of pooled plasma of wild-type (LDAH-WT/apoE^{-/-}) and LDAH transgenic (LDAH-Tg/apoE^{-/-}) mice used for atherosclerosis studies. **(A)** Males fed regular chow. **(B)** Females fed regular chow. VLDL: very low-density lipoprotein; IDL/LDL: intermediate-density lipoprotein/low-density lipoprotein; HDL: high-density lipoprotein.

(A)



(B)

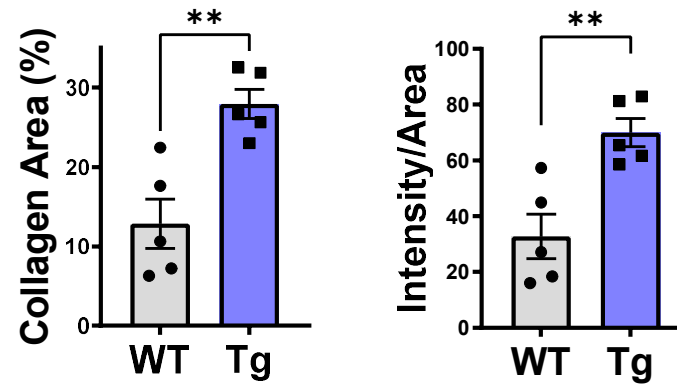


Figure S2. (A) Representative images showing increased fibrillar structures that stained positive with an anti-type I collagen antibody (green) in atherosclerotic lesions (outlined in white) of *Ldah^{Tg/0}ApoE^{-/-}* (Tg) male mice that are predominantly composed of Mac-3 positive cells (purple). Scale bar = 100 μm . **(B)** Quantification of collagen I-positive areas (left panel) and of fluorescence intensity (right panel) in lesions of Tg (blue bars) and WT (grey bars) mice. Data are presented as mean \pm SEM from $n=5$ independent samples per group. Comparisons were performed using two-tailed unpaired t -test. ** $P= 0.0032$ for Collagen Area (%) and ** $P= 0.0043$ for Intensity/Area.

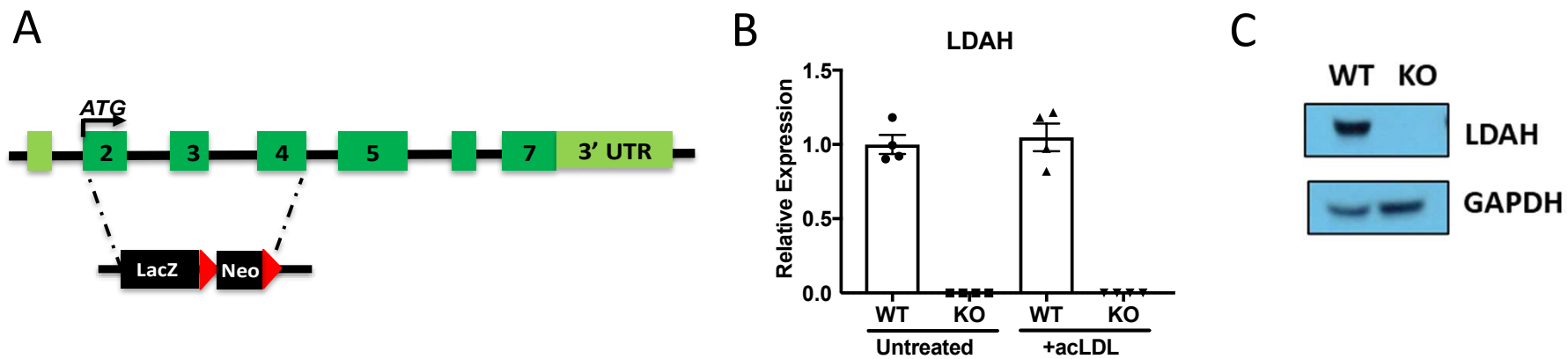


Figure S3. (A) LDAH gene targeting strategy by homologous recombination. **(B and C)** LDAH deficiency in peritoneal macrophages isolated from knockout (KO) mice was confirmed by **(B)** qPCR (n=3) and **(C)** Western blot. Data in panel B are presented as mean \pm SEM. The blot in panel C is representative of at least 3 independent experiments.

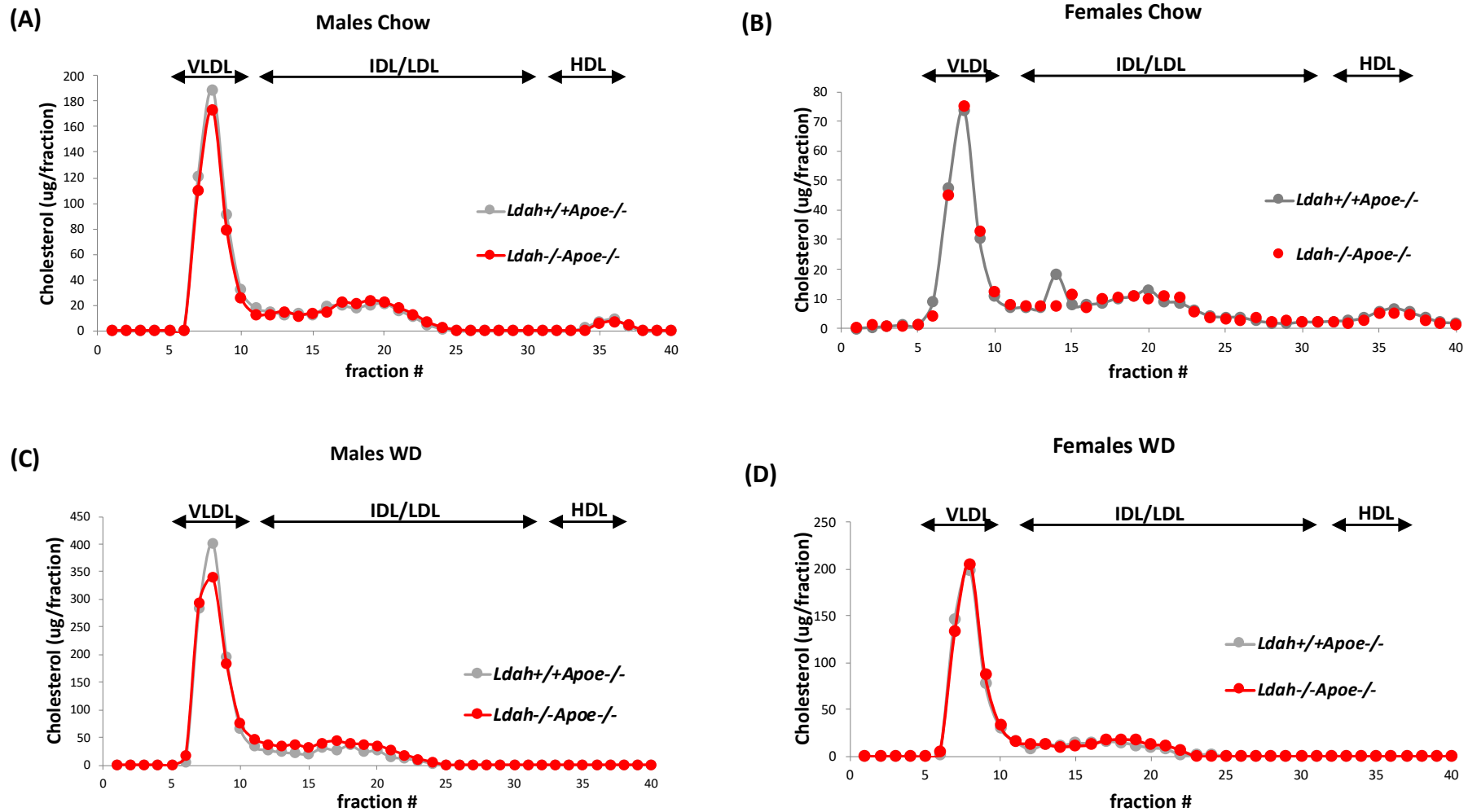


Figure S4. Cholesterol distribution in FPLC fractions of pooled plasma in the different experimental groups used to study the effects of LDAH deficiency on atherosclerosis development. **(A)** Males fed regular chow. **(B)** Females fed regular chow. **(C)** Males fed western diet (WD). **(D)** Females fed WD. VLDL: very low-density lipoprotein; IDL/LDL: intermediate-density lipoprotein/low-density lipoprotein; HDL: high-density lipoprotein.

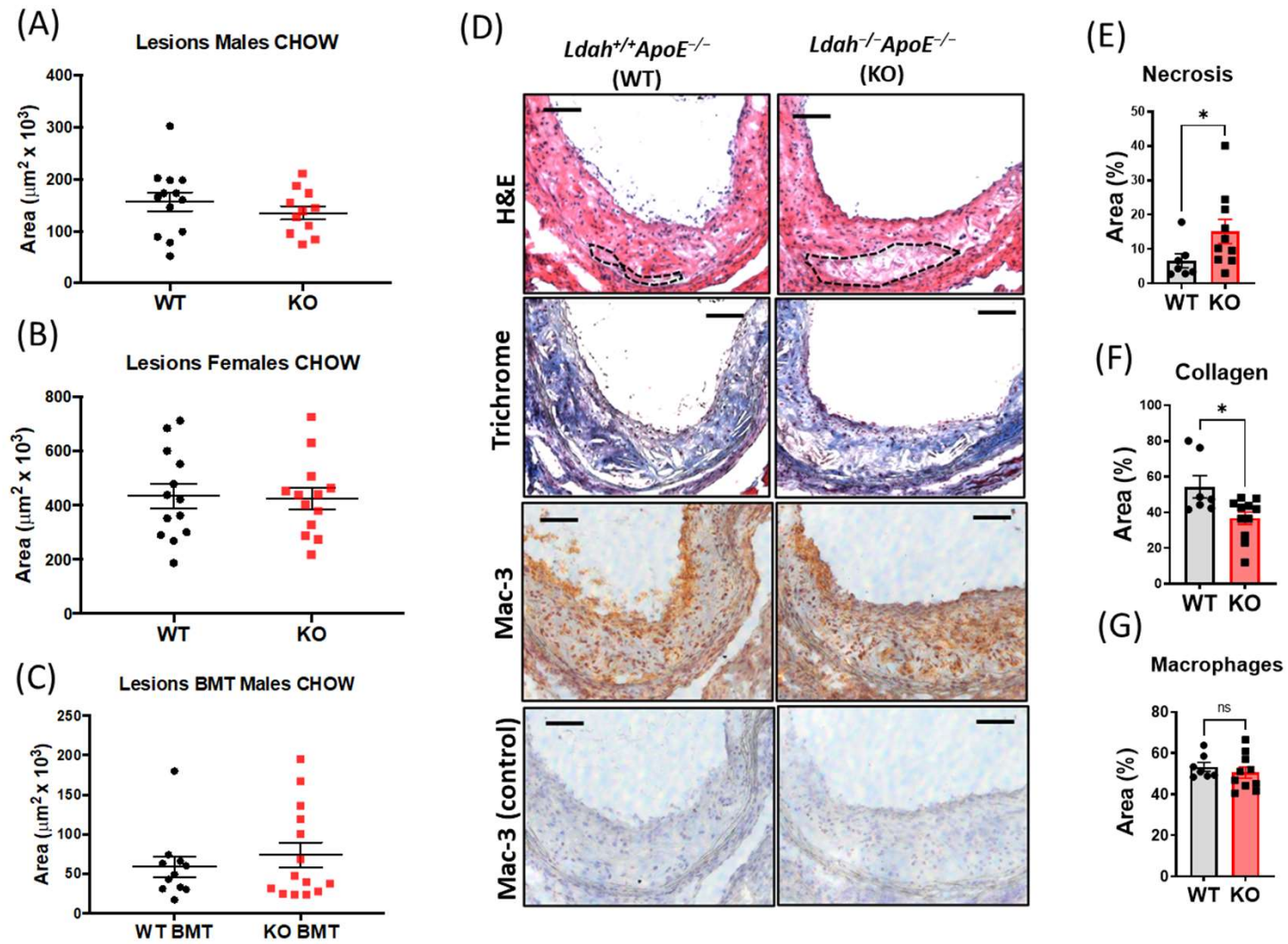


Figure S5. Effects of LDAH deficiency on atherosclerosis development in mice fed standard mouse chow. (A-C) In mice fed standard chow global or bone-marrow specific LDAH deficiency did not affect atherosclerosis development. **(A)** LDAH^{+/+}/apoE^{-/-} (wild-type, WT, black symbols, n=13) vs. global LDAH^{-/-}/apoE^{-/-} (KO, red symbols) males (n=11). **(B)** LDAH^{+/+}/apoE^{-/-} (wild-type, WT, black symbols, n=13) vs. global LDAH^{-/-}/apoE^{-/-} (KO, red symbols) females (n=13). **(C)** ApoE^{-/-} male mice were transplanted with bone-marrow cells isolated from LDAH^{+/+}/apoE^{-/-} mice (WT BMT, black symbols, n=11 recipients) or from LDAH^{-/-}/apoE^{-/-} mice (KO BMT, red symbols, n=14 recipients). **(D)** Representative H&E, Mason's trichrome and Mac-3 images of lesions of female mice. Necrotic cores are outline in black in H&E images. For Mac-3 (control) sections were staining following the Mac-3 staining protocol, without incubation with Mac-3 antibody. Scale bar: 100 μm . **(E)** Quantification of necrotic cores (n= 7 WT and n= 10 KO, *p= 0.033), **(F)** Quantification of collagen (n=7 WT and n=11 KO, *p=0.0441), **(G)** Quantification of % of lesion positive for Mac-3 (n=7 WT and n=10 KO, n.s.= not significant). Grey bars in E-G correspond to WT mice and red bars to KO mice. Data are presented as mean \pm SEM from independent samples. Panels C, E and F were analyzed by Mann-Whitney U. Panels A, B and G were analyzed using two-tailed unpaired t-test.

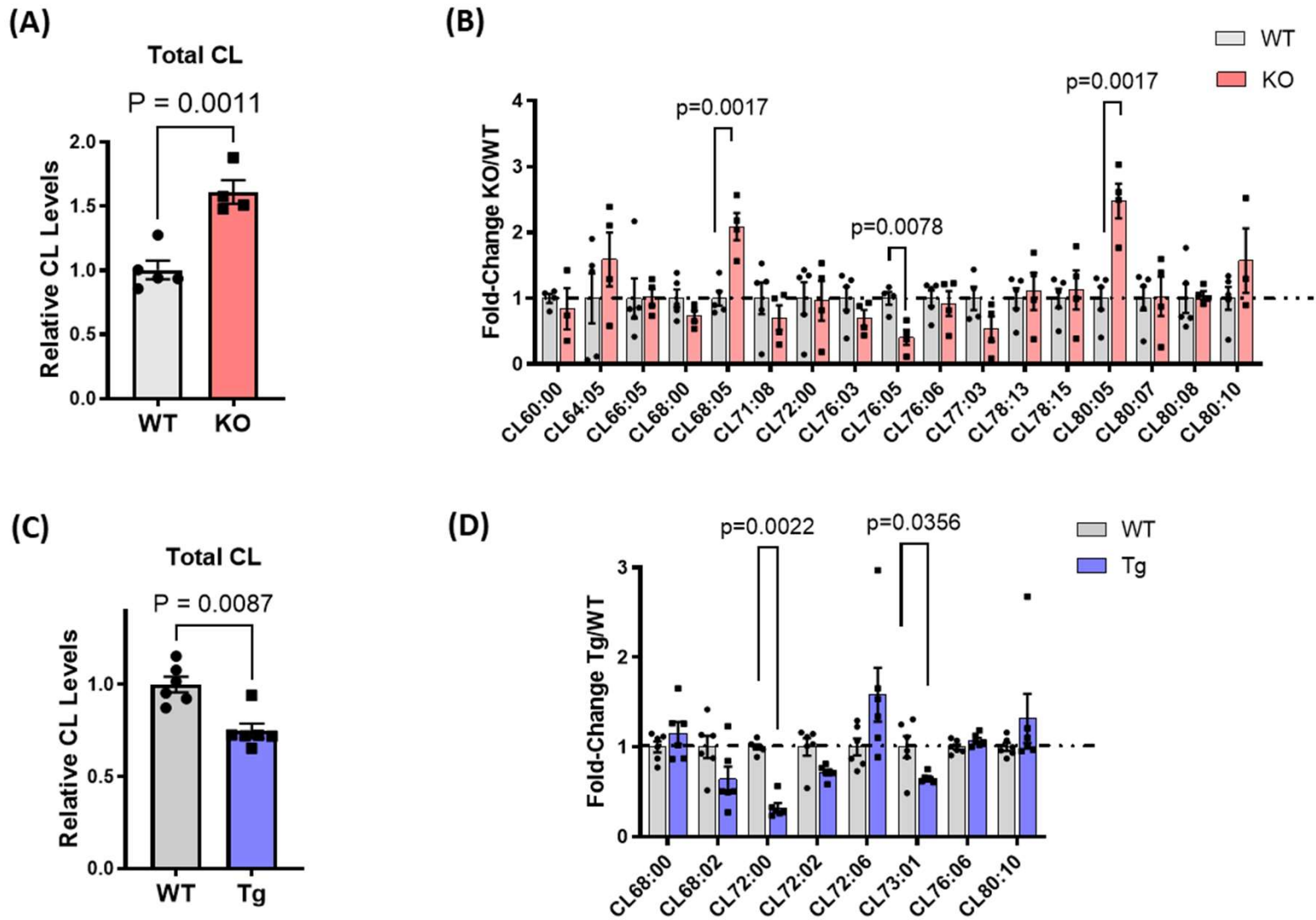
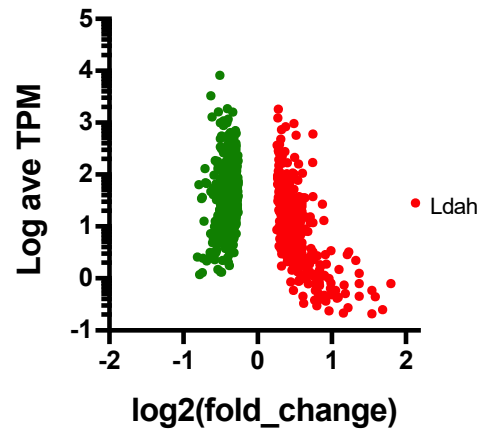


Figure S6. Impact of LDAH deficiency and overexpression on total cardiolipin (CL) levels and on individual CL species. (A and B) Relative levels of total cardiolipin and individual cardiolipin species in wild-type (WT, grey bars) and *Ldah*-KO (KO, red bars) peritoneal macrophages (PM) treated with oxLDL (50 μ g/ml) for 48h. **(A)** Total cardiolipin; **(B)** Main CL species identified by shotgun lipidomics. Bars represent mean \pm SEM of n=5 wild-type (WT) and n=4 *Ldah*-KO (KO) independent samples. **(C and D)** Relative levels of total cardiolipin and individual cardiolipin species in wild-type (WT, grey bars) and *Ldah*-Tg (Tg, blue bars) PM treated with oxLDL (50 μ g/ml) for 48h. **(A)** Total cardiolipin; **(B)** Main CL species identified by shotgun lipidomics. Bars represent mean \pm SEM of n=6 wild-type (WT) and n=6 *Ldah*-Tg (Tg) independent samples. Statistical analyses were performed by two-tailed unpaired *t*-test (CL 68:05, CL76:05, CL 80:05 in WT vs. KO), Welch's *t*-test (CL 73:01 in WT vs. Tg) or Mann-Whitney U (CL 72:00 in WT vs. Tg). The first numbers in the individual CL species shown in the X axis of panels **(B)** and **(D)** represent the sum of the carbon atoms in the four acyl chains of CL, and the numbers behind the colon indicate the total number of double bonds.

(A)

WT vs Tg



(B)

WT vs KO

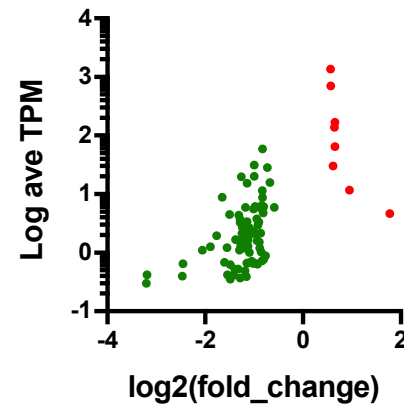


Figure S7. Volcano plots summarizing the distribution of of genes differentially expressed at an adjusted p value < 0.05 in the RNA-seq analyses . TPM: transcripts per million.

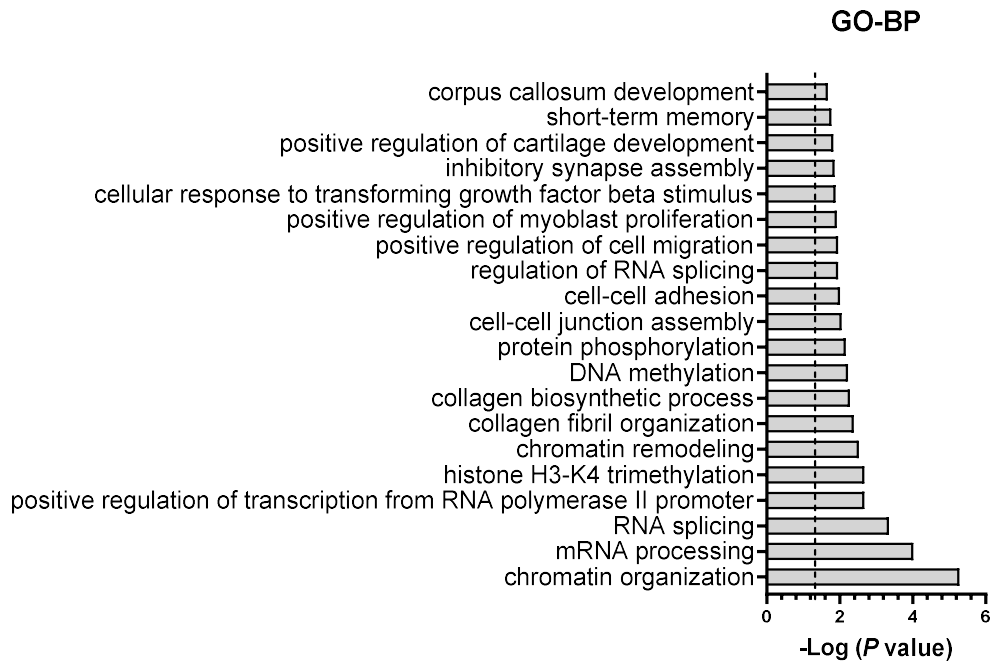
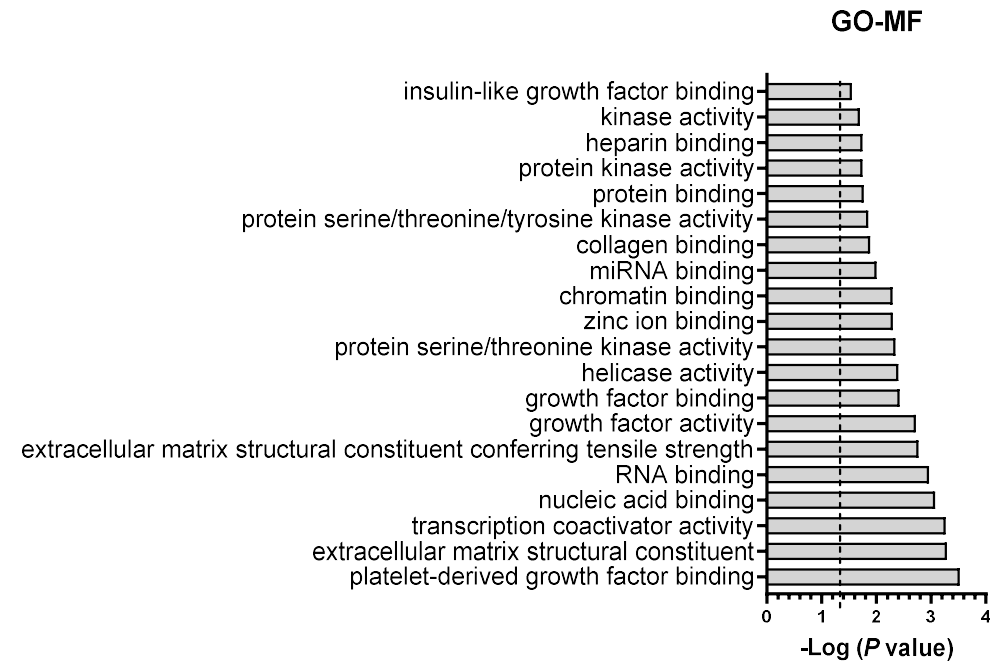
A**B**

Fig. S8. Gene ontology (GO) analysis of genes with expression proportional to LDAH levels identified by RNA-seq was performed using the DAVID Bioinformatics platform. **(A)** GO Biological Process (BP) and **(B)** GO Molecular Function (MF) identified multiple terms related to collagenous extracellular matrix synthesis and organization.

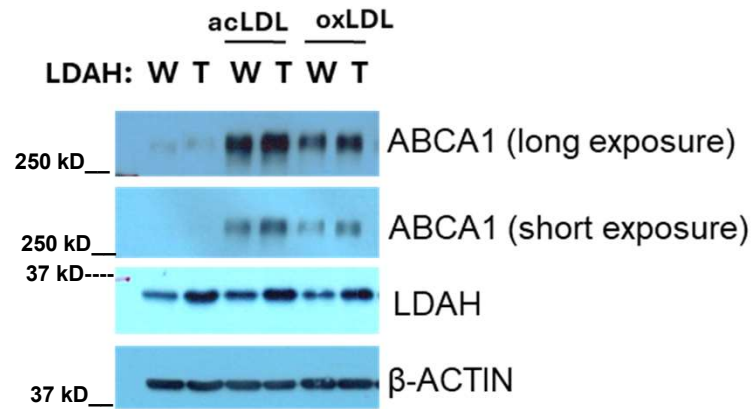


Fig. S9. ABCA1 and LDAH expression in wild-type (W) or LDAH-Tg (T) bone marrow macrophages (BMM) that remained untreated or were treated with acLDL (50 $\mu\text{g}/\text{mL}$) or oxLDL (50 $\mu\text{g}/\text{mL}$) for 48h. Blot is representative of 3 independent experiments.

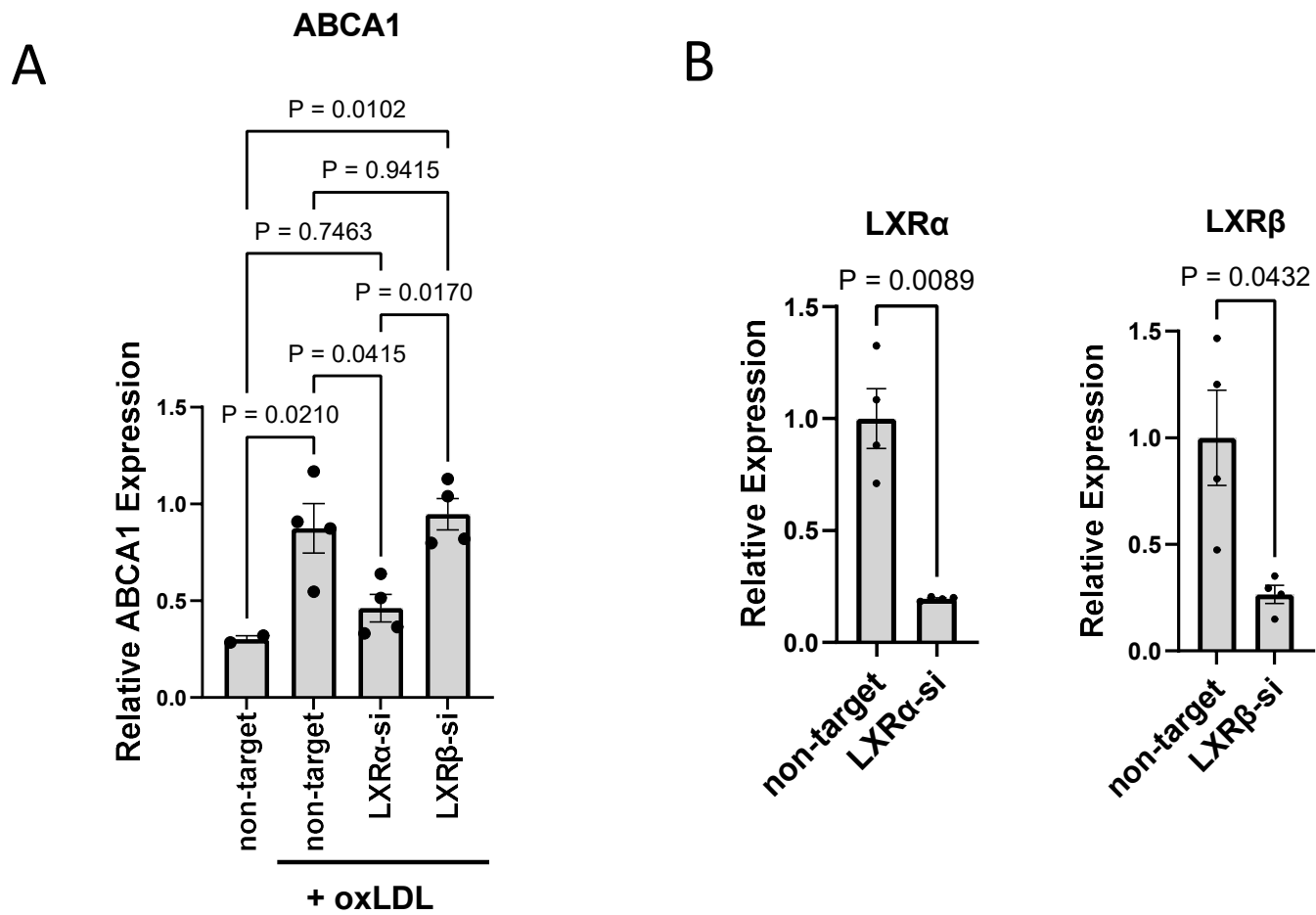


Fig. S10. (A) ABCA1 expression in response to oxLDL (50 μ g/mL for 48h) in bone marrow macrophages (BMM) treated with non-target siRNA or RNA against LXR α (LXR α -si) or LXR β (LXR β -si). **(B)** LXR α and LXR β expression in oxLDL-treated BMM used for the experiments in **(A)**. Panel **(A)** was analyzed by one-way ANOVA followed by Tukey's test. Comparisons in panel **(B)** were performed using Welch's *t*-test. N=4/group.

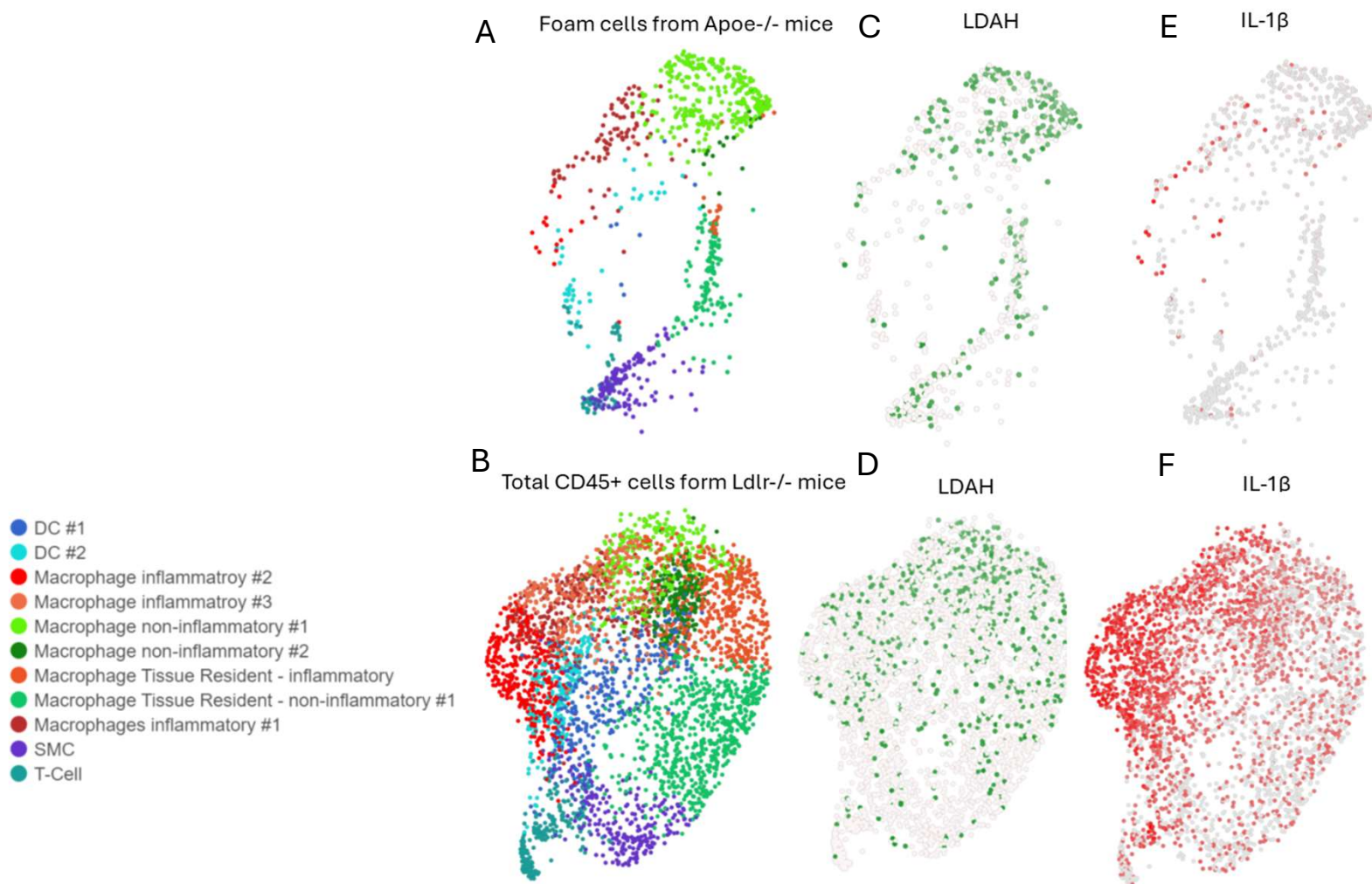
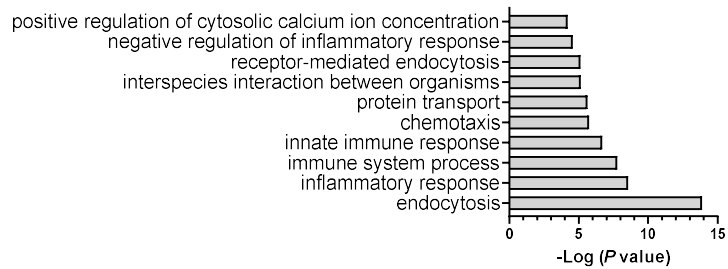


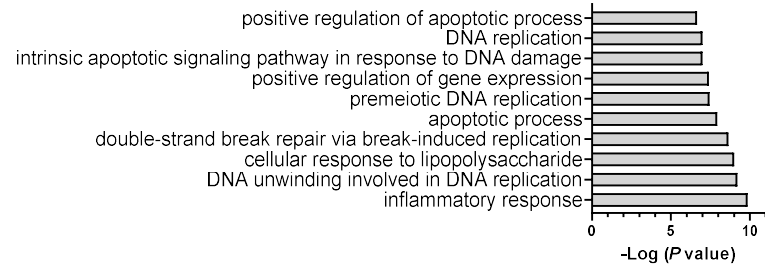
Fig. S11. Visualization of total t-SNE clustering and selected genes in the single cell RNA sequencing of aortic CD45⁺ cells and foam cells from mouse atherosclerotic aortas. **(A-B)** Cluster distribution in foam cells from Apoe^{-/-} mice **(A)** and total CD45⁺ cells from Ldlr^{-/-} mice **(B)**. **(C-F)** Visualization of LDAH **(C-D)** and IL-1 β **(E-F)** in the 2 cell populations distribution in total CD45⁺ and foam cell populations. Analysis was performed using the single cell sequencing data available in the GEO PRJNA477941 dataset.

MAINLY INFLAMMATORY and IMMUNE PROCESSES

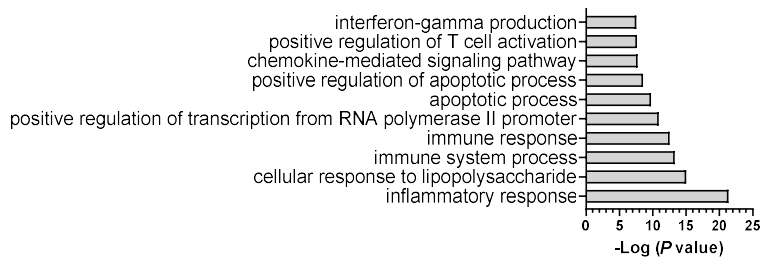
Macrophage Tissue Resident- inflammatory



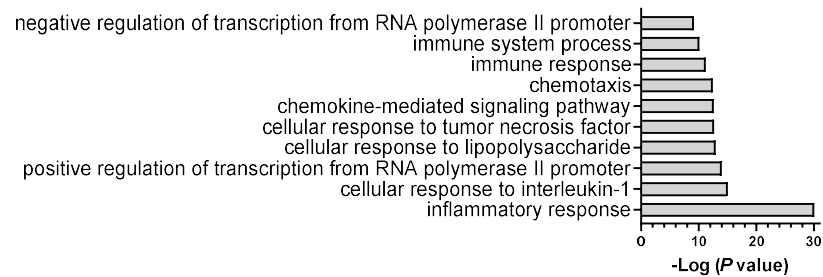
Macrophage Inflammatory #1



Macrophage Inflammatory #2

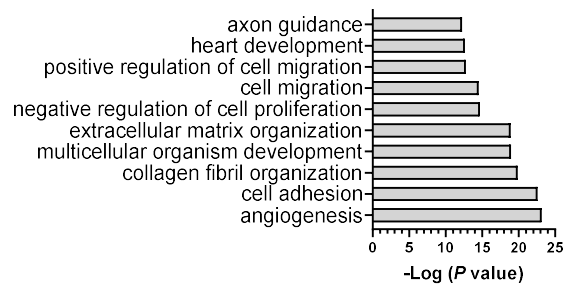


Macrophage Inflammatory #3

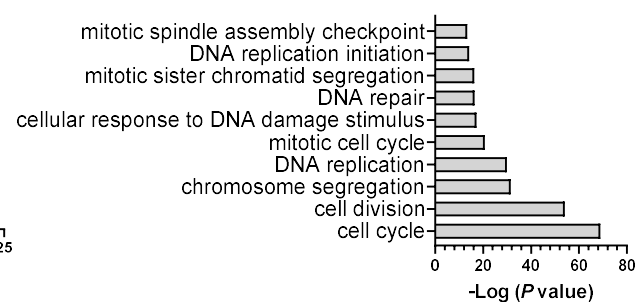


MAINLY NON-INFLAMMATORY/IMMUNE PROCESSES

Macrophage Tissue Resident-non inflammatory #1



Macrophage non-inflammatory #1



Macrophage non-inflammatory #2

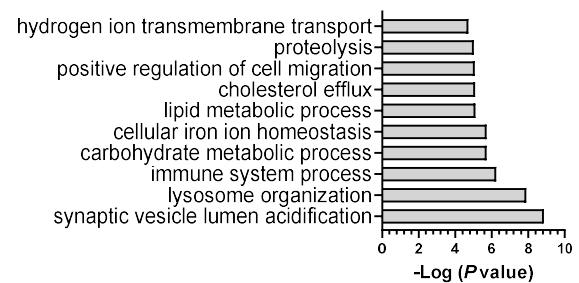


Fig. S12. Gene ontology (GO) analysis of genes in the macrophage clusters shown in **Figure S11**. Panels show the top 10 most significant GO Biological Process (BP) outputs. Analyses of macrophage clusters 3, 6, 7 and 8 showed high enrichment in inflammation and immune regulation regulated. Clusters 1, 2 and 11 were mainly enriched in biological processes not directly related to immune and inflammatory processes. Analyses were performed using the DAVID Bioinformatics platform.

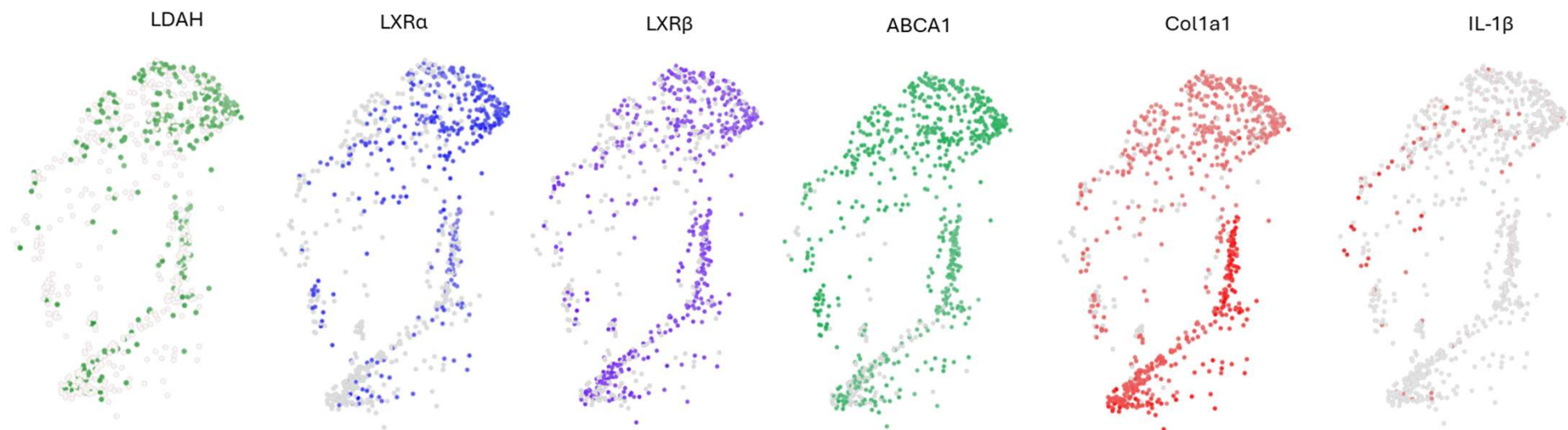


Fig. S13. Visualization of total t-SNEs for selected genes in the single cell RNA sequencing of aortic foam cells from *Apoe*^{-/-} mice. Analysis was performed using the single cell sequencing data available in the GEO PRJNA477941 dataset.

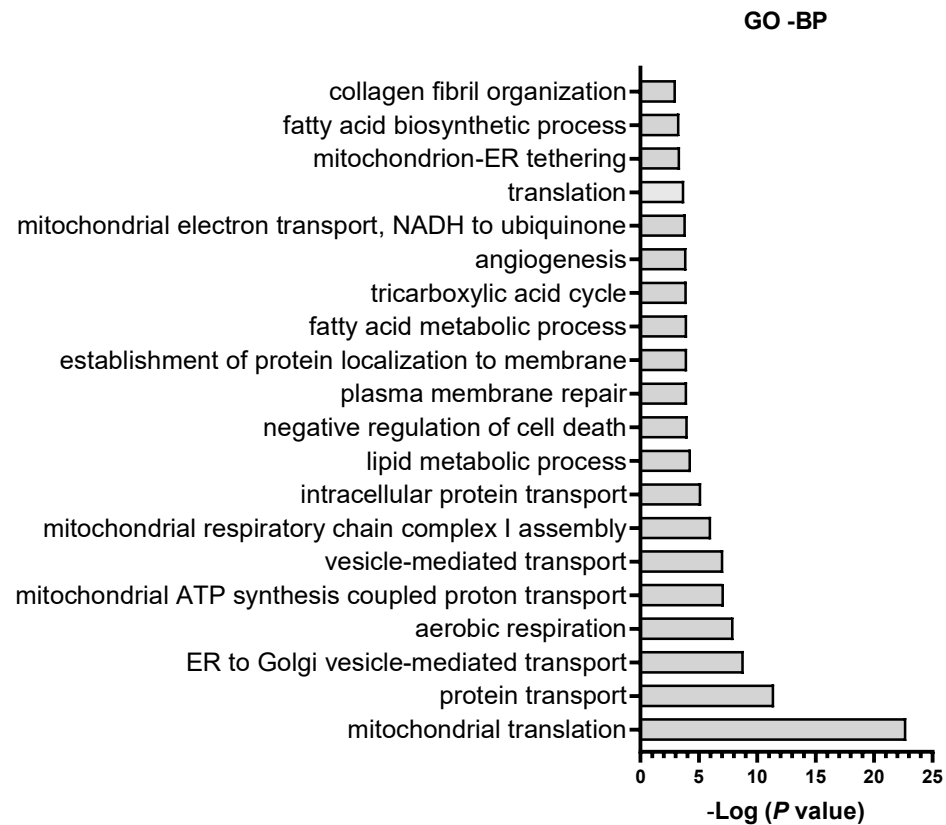
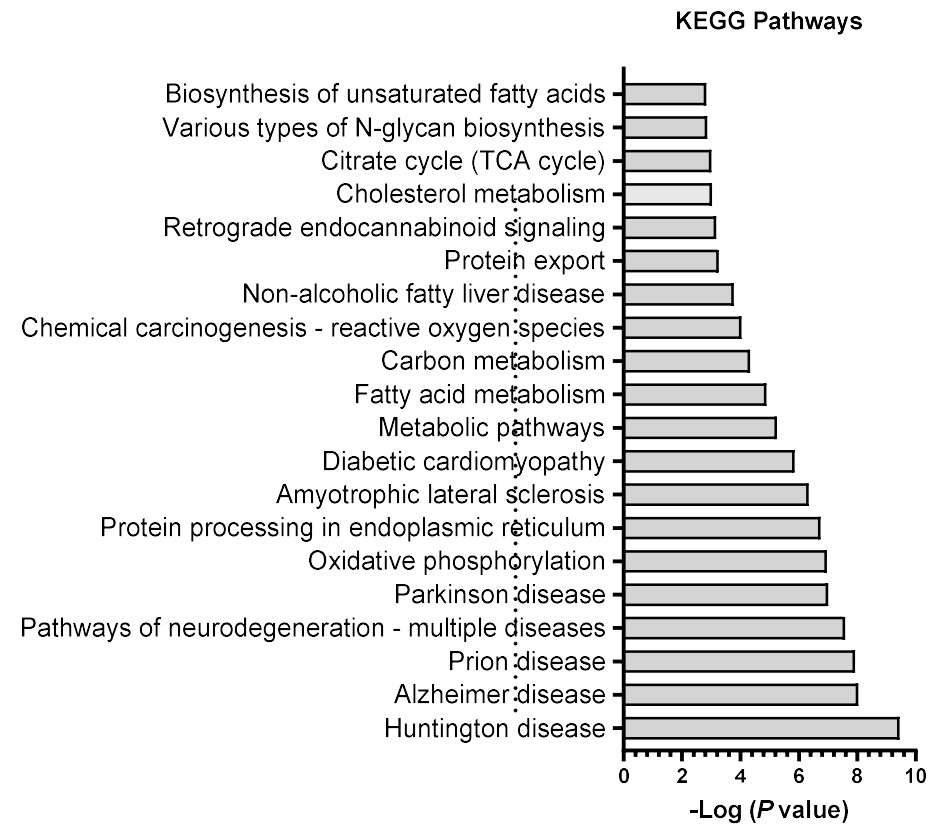
A**B**

Fig. S14. Gene ontology (GO) and pathway analysis of genes that correlate with LDAH at a false discovery rate (FDR) <math><e-7</math> in the single cell RNA sequencing of aortic CD45+ cells and foam cells from mouse atherosclerotic aortas in GSE116240. Panels show the top 20 most significant GO Biological Process (BP) (**A**) and KEGG pathways (**B**) identified using the DAVID Bioinformatics platform. The analyses returned multiple metabolism and fibrosis-related terms, in the absence of inflammation-related terms.

Table S1. Body weights and plasma lipids in male and female *Ldah^{0/0}/Apoe^{-/-}* (WT) and *Ldah^{Tg/0}/Apoe^{-/-}* (*Ldah-Tg*) mice fed a standard chow diet.

	Chow Diet			
	Males		Females	
	WT	<i>Ldah-Tg</i>	WT	<i>Ldah-Tg</i>
Body weight (g)	28.1 ± 0.6	27.1 ± 0.6	21.0 ± 0.6	21.8 ± 0.3
Triglyceride (mg/dL)	112 ± 12	126 ± 8	76 ± 4	80 ± 5
Cholesterol (mg/dL)	610 ± 28	630 ± 86	447 ± 20	433 ± 17
HDL-C (mg/dL)	27 ± 3	29 ± 2	19 ± 4	17 ± 2

Table S2. Body weights and plasma lipids in male and female *Ldah*^{+/+}/*Apoe*^{-/-} (WT) and *Ldah*^{-/-}/*Apoe*^{-/-} (*Ldah*-KO) mice fed a standard chow diet or western diet (WD).

	Chow Diet			
	Males		Females	
	WT	<i>Ldah</i> -KO	WT	<i>Ldah</i> -KO
Body weight (g)	28.5 ± 1.0	29.2 ± 1.1	21.0 ± 0.6	22.1 ± 0.4
Triglyceride (mg/dL)	130 ± 13	119 ± 14	65 ± 5	83 ± 8
Cholesterol (mg/dL)	603 ± 31	546 ± 32	370 ± 21	413 ± 18
HDL-C (mg/dL)	28 ± 3	28 ± 3	14 ± 1	17 ± 2
	Western Diet			
	Males		Females	
	WT	<i>Ldah</i> -KO	WT	<i>Ldah</i> -KO
Body weight (g)	35.4 ± 1.3	35.2 ± 1.4	27.6 ± 1.3	26.3 ± 1.3
Triglyceride (mg/dL)	125 ± 8	115 ± 10	101 ± 5	95 ± 9
Cholesterol (mg/dL)	1674 ± 61	1697 ± 65	960 ± 44	1011 ± 47
HDL-C (mg/dL)	20 ± 3	20 ± 2	17 ± 1	17 ± 1

Table S3. Main lipid classes and subclasses in *Ldah*-KO (K) vs. wild-type (WT) peritoneal macrophages treated with oxLDL (50 µg/ml).
Data are presented as normalized ion abundance per microgram of protein.

Lipid Category	W1	W2	W3	W4	W5	AVG	SEM	K1	K2	K3	K4	AVG	SEM
Total Chol Esters	4.077	3.477	3.392	3.860	2.931	3.547	0.198	4.651	4.475	4.074	4.508	4.427	0.124
Chol	1.025	1.105	1.021	1.112	0.869	1.027	0.044	1.385	1.293	1.237	1.268	1.296	0.032
Total Sterols	5.102	4.582	4.414	4.972	3.800	4.574	0.231	6.036	5.768	5.311	5.777	5.723	0.151
Total MG	N.D.	0.037	0.033	0.038	0.035	0.036	0.001	0.044	0.034	0.029	0.050	0.039	0.005
Total DG	0.327	0.174	0.172	0.197	0.153	0.205	0.031	0.193	0.187	0.168	0.176	0.181	0.006
Total TG	0.519	0.512	0.496	0.574	0.448	0.510	0.130	0.494	0.451	0.388	0.507	0.460	0.027
Total Neutral Lipids	0.846	0.724	0.701	0.810	0.636	0.751	0.163	0.732	0.671	0.585	0.733	0.680	0.037
NEFA	0.422	0.523	0.532	0.523	0.523	0.505	0.021	0.812	0.544	0.563	0.566	0.621	0.064
Total Lyso PC	N.D.	0.300	0.295	0.336	0.260	0.298	0.014	0.518	0.528	0.485	0.435	0.491	0.021
Total Diacyl PC	17.243	15.893	15.837	18.079	13.650	16.140	0.753	25.596	23.849	21.823	22.267	23.384	0.856
Total ePC	1.390	1.592	1.602	1.828	1.389	1.560	0.081	2.672	2.528	2.292	2.339	2.458	0.088
Total Ox-PC	0.047	0.014	0.032	0.029	0.022	0.029	0.006	0.060	0.108	0.088	0.079	0.084	0.010
Total PC	19.102	18.322	18.298	20.794	15.845	18.472	0.798	29.657	27.557	25.252	25.686	27.038	1.006
Total Lyso PE	0.494	0.450	0.461	0.313	0.281	0.400	0.043	0.612	0.568	0.417	0.354	0.488	0.061
Total Diacyl PE	13.720	13.298	13.694	8.976	8.459	11.630	1.194	15.804	15.456	11.494	9.052	12.951	1.626
Total pPE	13.926	13.386	13.943	9.108	8.598	11.792	1.207	17.000	16.517	12.286	9.505	13.827	1.788
Total PE	28.140	27.135	28.099	18.398	17.337	23.822	2.443	33.415	32.540	24.197	18.911	27.266	3.474
Total Lyso PS	0.044	0.051	0.035	0.031	0.030	0.038	0.004	0.096	0.056	0.033	0.038	0.056	0.014
Total Diacyl PS	6.258	7.117	4.552	3.580	3.454	4.992	0.730	9.031	7.642	5.195	5.030	6.724	0.974
Total pPS	0.153	0.161	0.174	0.108	0.301	0.179	0.032	0.328	0.289	0.312	0.392	0.330	0.022
Total ePS	0.003	0.004	0.006	0.003	0.006	0.004	0.001	0.005	0.004	0.005	0.006	0.005	0.001
Total PS	6.459	7.332	4.767	3.722	3.791	5.214	0.724	9.459	7.991	5.544	5.466	7.115	0.977
Total Lyso PI	0.060	0.062	0.070	0.053	0.047	0.058	0.004	0.094	0.089	0.077	0.050	0.078	0.010
Total Diacyl PI	4.455	4.299	4.262	2.973	2.361	3.670	0.422	5.168	5.026	3.621	2.631	4.112	0.605
Total pPI	0.842	0.914	0.936	0.741	0.850	0.857	0.034	1.392	1.136	1.168	0.989	1.171	0.083
Total PI	5.357	5.275	5.268	3.767	3.258	4.585	0.446	6.655	6.251	4.866	3.670	5.360	0.681
Total Lyso PG	0.067	0.063	0.063	0.040	0.030	0.053	0.007	0.073	0.074	0.057	0.037	0.060	0.009
Total Diacyl PG	6.021	5.950	5.993	3.873	3.802	5.128	0.527	7.674	6.926	5.292	4.242	6.033	0.777
Total pPG	0.017	0.014	0.015	0.016	0.002	0.013	0.003	0.017	0.016	0.009	0.002	0.011	0.004
Total ALL PG	6.105	6.027	6.071	3.929	3.834	5.193	0.536	7.764	7.016	5.357	4.281	6.104	0.789
Total CL	0.594	0.755	0.557	0.554	0.508	0.594	0.043	1.112	0.876	0.933	0.893	0.953	0.054
Total PA	0.506	0.498	0.411	0.326	0.127	0.373	0.070	0.654	0.544	0.326	0.133	0.414	0.116
TOTAL ALL PHOSPHOLIPIDS	66.263	65.344	63.470	51.490	44.700	58.253	4.308	88.717	82.775	66.474	59.041	74.252	6.915
SM	5.081	3.923	3.813	4.290	3.227	4.067	0.306	6.579	6.546	6.207	5.817	6.287	0.178
Cer	1.103	1.119	1.141	0.927	1.004	1.059	0.041	1.349	1.432	1.358	1.192	1.333	0.051
2-hydroxy Cer	0.006	0.002	0.012	0.007	0.005	0.007	0.002	0.001	0.004	0.004	0.003	0.003	0.001
Hex-Cer	0.063	0.057	0.057	0.057	0.048	0.056	0.002	0.067	0.067	0.059	0.071	0.066	0.003
Lac-Cer	N.D.	0.002	0.002	0.002	0.004	0.003	0.000	0.010	0.010	0.009	0.006	0.009	0.001
Total All Sphingolipids	6.253	5.104	5.025	5.283	4.288	5.191	0.315	8.006	8.058	7.637	7.089	7.698	0.224

Table S4. Main lipid classes and subclasses in *Ldah*-Tg (T) vs. wild-type (WT) peritoneal macrophages treated with oxLDL (50 µg/ml).
Data are presented as normalized ion abundance per microgram of protein.

Lipid Category	WT1	WT2	WT3	WT4	WT5	WT6	AVG	SEM	T1	T2	T3	T4	T5	T6	AVG	SEM
Total Chol Esters	3.007	2.998	2.584	2.834	2.609	2.343	2.729	0.107	1.850	1.874	1.850	1.864	1.890	1.728	1.843	0.024
Chol	1.978	1.974	1.718	1.871	1.738	1.594	1.812	0.063	1.301	1.302	1.321	1.309	1.348	1.216	1.300	0.018
Total Sterols	4.985	4.972	4.303	4.705	4.347	3.937	4.541	0.170	3.150	3.176	3.172	3.174	3.238	2.945	3.142	0.041
Total MG	0.003	0.003	0.002	0.003	0.002	0.002	0.002	0.000	0.001	0.001	0.002	0.001	0.002	0.001	0.001	0.000
Total DG	0.182	0.181	0.159	0.167	0.155	0.153	0.166	0.005	0.115	0.119	0.115	0.115	0.113	0.103	0.113	0.002
Total TG	0.651	0.612	0.531	0.568	0.528	0.517	0.568	0.022	0.480	0.447	0.451	0.454	0.466	0.431	0.455	0.007
Total Neutral Lipids	0.835	0.795	0.692	0.738	0.684	0.673	0.736	0.027	0.596	0.568	0.567	0.571	0.581	0.534	0.569	0.008
Total NEFA	0.755	0.795	0.643	0.764	0.715	0.578	0.708	0.034	0.745	0.921	0.802	0.698	0.660	0.605	0.739	0.046
Total Lyso PC	0.326	0.348	0.316	0.342	0.328	0.321	0.330	0.005	0.392	0.383	0.376	0.377	0.385	0.350	0.377	0.006
Total Diacyl PC	23.486	24.728	21.831	23.751	21.650	21.643	22.848	0.538	24.440	23.786	23.382	23.373	23.673	21.712	23.394	0.372
Total ePC	1.969	2.041	1.824	1.957	1.819	1.849	1.910	0.038	2.220	2.128	2.089	2.087	2.117	1.943	2.098	0.037
Total Ox-PC	0.001	0.001	0.000	N.D.	0.001	0.001	0.001	0.000	0.001	0.001	0.001	N.D.	0.001	0.001	0.001	0.000
Total PC	25.783	27.118	23.972	26.050	23.798	23.813	25.089	0.579	27.054	26.298	25.849	25.837	26.175	24.005	25.870	0.415
Total Lyso PE	0.227	0.252	0.206	0.241	0.197	0.197	0.220	0.010	0.316	0.305	0.295	0.270	0.277	0.272	0.290	0.008
Total Diacyl PE	6.979	7.363	6.611	6.920	6.537	6.308	6.786	0.154	7.403	7.303	7.177	7.211	7.323	6.745	7.194	0.096
Total pPE	6.351	6.707	5.996	6.336	5.882	5.771	6.174	0.144	6.859	6.890	6.756	6.791	6.910	6.359	6.761	0.084
Total PE	13.557	14.322	12.813	13.497	12.616	12.277	13.180	0.306	14.578	14.499	14.228	14.272	14.510	13.377	14.244	0.183
Total Lyso PS	0.030	0.033	0.026	0.031	0.023	0.025	0.028	0.002	0.053	0.047	0.045	0.042	0.042	0.042	0.045	0.002
Total Diacyl PS	5.079	5.377	4.741	5.063	4.705	4.540	4.917	0.126	5.324	5.229	5.071	5.188	5.308	4.898	5.170	0.066
Total pPS	0.877	0.923	0.825	0.867	0.826	0.771	0.848	0.021	0.756	0.723	0.728	0.776	0.822	0.785	0.765	0.015
Total ePS	0.004	0.005	0.005	0.005	0.005	0.005	0.005	0.000	0.006	0.004	0.004	0.005	0.004	0.003	0.005	0.000
Total ALL PS	5.990	6.337	5.597	5.967	5.558	5.341	5.798	0.149	6.139	6.003	5.848	6.011	6.176	5.728	5.984	0.070
Total Lyso PI	0.024	0.026	0.022	0.026	0.019	0.022	0.023	0.001	0.049	0.048	0.045	0.042	0.045	0.043	0.045	0.001
Total Diacyl PI	1.578	1.689	1.415	1.606	1.407	1.392	1.514	0.051	1.897	1.894	1.781	1.821	1.833	1.708	1.822	0.029
Total ALL PI	1.602	1.715	1.437	1.632	1.426	1.413	1.538	0.053	1.947	1.942	1.826	1.863	1.877	1.751	1.867	0.030
Total Lyso PG	0.037	0.040	0.034	0.037	0.032	0.030	0.035	0.001	0.044	0.044	0.043	0.040	0.043	0.043	0.043	0.001
Total Diacyl PG	1.902	2.041	1.816	1.892	1.792	1.717	1.860	0.046	2.179	2.145	2.113	2.116	2.180	2.022	2.126	0.024
Total ALL PG	1.939	2.081	1.849	1.929	1.824	1.748	1.895	0.047	2.223	2.189	2.156	2.156	2.223	2.065	2.169	0.024
Total CL	0.070	0.093	0.077	0.082	0.075	0.087	0.081	0.003	0.076	0.058	0.058	0.059	0.058	0.053	0.060	0.003
Total PA	0.014	0.014	0.013	0.014	0.012	0.012	0.013	0.000	0.037	0.032	0.026	0.028	0.023	0.021	0.028	0.002
Total All Phospholipi	47.354	49.966	44.321	47.539	43.883	43.277	46.057	1.074	50.108	49.079	48.165	48.362	49.166	45.249	48.355	0.682
SM	4.654	5.172	4.497	5.014	4.485	4.335	4.693	0.135	4.926	4.974	4.910	4.823	4.898	4.431	4.827	0.082
Cer	1.103	1.119	1.123	0.927	1.004	1.004	1.047	0.033	1.349	1.432	1.209	1.358	1.192	1.192	1.289	0.043
2-hydroxy Cer	0.006	0.002	0.012	0.007	0.005	0.005	0.006	0.001	0.001	0.004	0.004	0.004	0.003	0.003	0.003	0.000
Hex-Cer	0.018	0.023	0.020	0.025	0.019	0.023	0.021	0.001	0.027	0.030	0.028	0.027	0.026	0.023	0.027	0.001
Lac-Cer	0.005	0.006	0.005	0.005	0.005	0.004	0.005	0.000	0.005	0.005	0.006	0.005	0.007	0.005	0.005	0.000
Total All Sphingolipic	5.786	6.322	5.657	5.977	5.518	5.371	5.772	0.139	6.308	6.446	6.156	6.216	6.125	5.655	6.151	0.110

Table S5. Genes significantly regulated at and adjusted p-value (q-value)<0.05 in *Ldah*-Tg PM treated with oxLDL.

Data were analyzed using the Wald test (two-tailed) followed by the Benjamini–Hochberg test to estimate the false discovery rate adjusted p-value (q_value).

gene_id	gene synonym	log2_fold change_Tg/WT	p_value	q_value
ENSMUSG00000037669.14	Ldah	2.12724	0.00005	0.00258735
ENSMUSG00000087445.1	Gm14286	1.79927	0.0024	0.0394646
ENSMUSG00000036928.14	Stag3	1.68916	0.0017	0.0314636
ENSMUSG00000021268.17	Meg3	1.59044	0.0007	0.0179285
ENSMUSG00000026955.13	Sapcd2	1.54334	0.0032	0.0475054
ENSMUSG00000095040.2	1700001J03Rik	1.53904	0.00315	0.0472053
ENSMUSG00000028139.5	Riad1	1.37459	0.0003	0.0100619
ENSMUSG00000070891.2	Gm12689	1.37459	0.00005	0.00258735
ENSMUSG00000019737.14	Syne4	1.37174	0.00045	0.0132986
ENSMUSG000000105008.1	Gm43652	1.32592	0.00005	0.00258735
ENSMUSG00000031098.18	Syt8	1.23291	0.001	0.0226798
ENSMUSG00000046295.13	Ankle1	1.21904	0.00285	0.0440101
ENSMUSG00000045903.8	Npas4	1.20938	0.00005	0.00258735
ENSMUSG00000009145.6	Dqx1	1.18532	0.00005	0.00258735
ENSMUSG00000073418.4	C4b	1.17038	0.003	0.0455497
ENSMUSG00000027314.6	Dll4	1.1588	0.0015	0.0293926
ENSMUSG00000053964.17	Lgals4	1.09883	0.00005	0.00258735
ENSMUSG000000103115.1	Gm37584	1.09089	0.0025	0.0405307
ENSMUSG00000048856.8	Slc25a47	1.07317	0.00155	0.0298193
ENSMUSG00000097534.3	Gm16675	1.05249	0.0008	0.0195422
ENSMUSG00000021815.3	Mss51	0.996082	0.0009	0.0212086
ENSMUSG000000106547.1	B230303O12Rik	0.988964	0.00005	0.00258735
ENSMUSG000000080316.10	Spaca6	0.988892	0.0026	0.0414106
ENSMUSG00000074415.10	2610203C20Rik	0.982298	0.00005	0.00258735
ENSMUSG00000031861.15	Lpar2	0.965364	0.00005	0.00258735
ENSMUSG00000028845.15	Tekt2	0.965203	0.00095	0.0220588
ENSMUSG00000023993.6	Trem1	0.926654	0.00005	0.00258735
ENSMUSG00000048329.7	Mfsd6l	0.922582	0.0031	0.0466214
ENSMUSG00000099398.1	Ms4a14	0.914776	0.00005	0.00258735
ENSMUSG00000033763.14	Mtss1l	0.909037	0.0008	0.0195422
ENSMUSG00000074899.4	Sptbn5	0.900573	0.00005	0.00258735
ENSMUSG00000000386.14	Mx1	0.89838	0.0026	0.0414106
ENSMUSG000000097451.9	Rian	0.898293	0.00185	0.0333632
ENSMUSG00000096768.7	Erdr1	0.896468	0.00005	0.00258735
ENSMUSG00000022489.5	Pde1b	0.873649	0.00005	0.00258735
ENSMUSG00000011154.17	Cfap161	0.852316	0.0001	0.00449574
ENSMUSG00000066975.12	Cryba4	0.848567	0.00205	0.0356026
ENSMUSG00000023473.11	Celsr3	0.841332	0.00075	0.0188287
ENSMUSG00000032690.16	Oas2	0.838816	0.0001	0.00449574
ENSMUSG00000015377.9	Dennd6b	0.837011	0.00005	0.00258735
ENSMUSG00000049676.14	Catsperg1	0.829967	0.0029	0.0445111
ENSMUSG00000031380.10	Figf	0.829391	0.00255	0.0411309
ENSMUSG00000023912.9	Slc25a27	0.825252	0.00205	0.0356026
ENSMUSG000000109819.1	RP24-1519.3	0.824107	0.0021	0.0362229
ENSMUSG00000054135.2	A430110L20Rik	0.815496	0.00005	0.00258735
ENSMUSG00000027318.17	Adam33	0.806218	0.00005	0.00258735
ENSMUSG00000002100.15	Mybpc3	0.801451	0.00095	0.0220588
ENSMUSG00000085028.2	Slc2a4rg-ps	0.795623	0.00005	0.00258735
ENSMUSG000000104943.1	Gm42868	0.781145	0.001	0.0226798
ENSMUSG000000103839.1	Gm37607	0.777302	0.00025	0.00905571
ENSMUSG00000045838.8	A430105I19Rik	0.770408	0.00035	0.011149
ENSMUSG00000023795.16	Pisd-ps2	0.763527	0.0016	0.0303665
ENSMUSG00000097180.5	2700038G22Rik	0.761977	0.0001	0.00449574
ENSMUSG000000092274.2	Neat1	0.749748	0.00005	0.00258735
ENSMUSG00000047909.11	Ankrd16	0.748925	0.00005	0.00258735
ENSMUSG00000051550.10	Zfp579	0.746894	0.00005	0.00258735
ENSMUSG00000001506.10	Col1a1	0.745774	0.00005	0.00258735
ENSMUSG00000043833.6	2900005J15Rik	0.745078	0.00035	0.011149
ENSMUSG000000092341.2	Malat1	0.743202	0.00095	0.0220588
ENSMUSG00000035299.16	Mid1	0.726302	0.0013	0.0271076
ENSMUSG00000000753.15	Serpinf1	0.722779	0.00345	0.0498167
ENSMUSG00000021495.8	Fam193b	0.712792	0.00005	0.00258735
ENSMUSG00000029720.9	Gm20605	0.711353	0.00095	0.0220588

ENSMUSG00000096960.1	A230028O05Rik	0.704329	0.00005	0.00258735
ENSMUSG00000032607.12	Amt	0.702864	0.002	0.035364
ENSMUSG000000103983.1	Gm20045	0.683563	0.00005	0.00258735
ENSMUSG00000045282.7	Tmem86b	0.680165	0.00185	0.0333632
ENSMUSG00000027239.14	Mdk	0.680099	0.00005	0.00258735
ENSMUSG000000106383.1	E330034L11Rik	0.679915	0.00005	0.00258735
ENSMUSG00000004187.10	Kifc2	0.667393	0.00005	0.00258735
ENSMUSG00000074867.3	Zfp808	0.646855	0.00005	0.00258735
ENSMUSG00000091144.2	Phf11c	0.64659	0.002	0.00775413
ENSMUSG00000036856.4	Wnt4	0.642024	0.00005	0.00258735
ENSMUSG00000018651.14	Tada2a	0.64063	0.0003	0.0100619
ENSMUSG00000097296.1	Gm26532	0.639555	0.00005	0.00258735
ENSMUSG00000020474.11	Polm	0.637051	0.00005	0.00258735
ENSMUSG00000023007.15	Prpf40b	0.637045	0.0002	0.00775413
ENSMUSG000000101609.1	Kcnq1ot1	0.624514	0.00005	0.00258735
ENSMUSG00000078485.2	Plekhn1	0.624133	0.00005	0.00258735
ENSMUSG000000103857.1	Gm37249	0.620179	0.0024	0.0394646
ENSMUSG00000014786.7	Slc9a5	0.614053	0.0015	0.0293926
ENSMUSG00000096780.7	Tmem181b-ps	0.612651	0.00005	0.00258735
ENSMUSG00000067203.7	H2-K2	0.611205	0.00005	0.00258735
ENSMUSG00000022070.6	Bora	0.606144	0.00005	0.00258735
ENSMUSG00000042625.16	Safb2	0.604502	0.00025	0.00905571
ENSMUSG00000038884.14	A230050P20Rik	0.60378	0.00005	0.00258735
ENSMUSG00000096929.7	A330023F24Rik	0.603728	0.00005	0.00258735
ENSMUSG00000060224.3	Pyroxd2	0.60271	0.00005	0.00258735
ENSMUSG00000035967.15	Ddx26b	0.601304	0.0008	0.0195422
ENSMUSG00000027522.15	Stx16	0.601015	0.00005	0.00258735
ENSMUSG00000025507.13	Pidd1	0.596642	0.00285	0.0440101
ENSMUSG00000086859.3	Snhg20	0.59441	0.00015	0.00627624
ENSMUSG00000045065.7	9930022D16Rik	0.594076	0.00105	0.0236027
ENSMUSG00000028028.11	Alpk1	0.592549	0.00005	0.00258735
ENSMUSG00000033705.16	Stard9	0.590706	0.0005	0.0142449
ENSMUSG00000035545.13	Leng8	0.587812	0.00005	0.00258735
ENSMUSG00000071203.6	Naip5	0.587525	0.00005	0.00258735
ENSMUSG00000046808.17	Atp10d	0.583471	0.0001	0.00449574
ENSMUSG00000044244.18	Il2orb	0.580198	0.00075	0.0188287
ENSMUSG00000040663.8	Clcf1	0.579513	0.00005	0.00258735
ENSMUSG00000055897.13	Ppp4r1l-ps	0.579398	0.0008	0.0195422
ENSMUSG00000097823.2	Gm16701	0.57861	0.00325	0.047911
ENSMUSG00000051790.15	Nlgn2	0.57853	0.00095	0.0220588
ENSMUSG00000073609.9	D2hgdh	0.57739	0.0006	0.0160143
ENSMUSG00000054737.11	Zfp182	0.577255	0.00005	0.00258735
ENSMUSG00000097313.1	Gm26569	0.57654	0.00005	0.00258735
ENSMUSG00000042138.7	Msantd2	0.576127	0.00005	0.00258735
ENSMUSG00000097636.7	Mirt1	0.575583	0.0014	0.0281287
ENSMUSG00000012017.3	Scarf2	0.571549	0.00135	0.0276053
ENSMUSG00000086825.1	Gm15675	0.571368	0.00055	0.0152247
ENSMUSG00000082286.10	Pisd-ps1	0.570852	0.00005	0.00258735
ENSMUSG00000048537.15	Phldb1	0.570324	0.00085	0.0203711
ENSMUSG00000083161.1	Gm11427	0.566701	0.00005	0.00258735
ENSMUSG000000103520.1	1110025M09Rik	0.565141	0.00145	0.0286788
ENSMUSG00000035649.17	Zcchc7	0.56381	0.0001	0.00449574
ENSMUSG00000008200.14	Fnbp4	0.559785	0.0003	0.0100619
ENSMUSG00000098055.1	Gm26947	0.557145	0.00295	0.0450604
ENSMUSG00000049670.8	Morn4	0.554542	0.00175	0.0321078
ENSMUSG00000037965.14	Zc3h7a	0.55448	0.00025	0.00905571
ENSMUSG00000032198.8	Dock6	0.552541	0.0002	0.00775413
ENSMUSG00000037443.13	Cep85	0.547203	0.0006	0.0160143
ENSMUSG00000085741.8	5430405H02Rik	0.544048	0.0006	0.0160143
ENSMUSG00000069727.5	Gm5595	0.542098	0.0001	0.00449574
ENSMUSG00000022974.12	Paxbp1	0.541803	0.00225	0.038034
ENSMUSG000000101462.2	Gm3052	0.541342	0.0028	0.0435563
ENSMUSG00000029490.3	Mfsd7a	0.540035	0.00005	0.00258735
ENSMUSG00000024174.8	Pot1b	0.539685	0.00005	0.00258735
ENSMUSG00000034800.15	Zfp661	0.535567	0.00005	0.00258735
ENSMUSG00000097415.2	AU020206	0.532874	0.00005	0.00258735

ENSMUSG00000056592.14	Zfp658	0.531401	0.00005	0.00258735
ENSMUSG00000099481.6	Xndc1	0.531148	0.00035	0.011149
ENSMUSG00000037266.18	Rsrp1	0.521973	0.0003	0.0100619
ENSMUSG00000029524.16	Sirt4	0.520928	0.0016	0.0303665
ENSMUSG00000032621.8	Srek1	0.51891	0.0008	0.0195422
ENSMUSG00000030279.15	C2cd5	0.516531	0.0002	0.00775413
ENSMUSG00000026875.14	Traf1	0.511764	0.00105	0.0236027
ENSMUSG00000028464.16	Tpm2	0.511366	0.0027	0.04226
ENSMUSG00000042249.11	Adrbk2	0.509783	0.00005	0.00258735
ENSMUSG00000054051.6	Ercc6	0.509197	0.00005	0.00258735
ENSMUSG00000014158.11	Trpv4	0.508717	0.00005	0.00258735
ENSMUSG00000068394.4	Cep152	0.507763	0.00005	0.00258735
ENSMUSG00000037243.17	Zfp692	0.507123	0.00005	0.00258735
ENSMUSG00000032177.16	Pde4a	0.50623	0.0003	0.0100619
ENSMUSG00000024830.16	Rps6kb2	0.505946	0.00005	0.00258735
ENSMUSG00000093765.7	Gm20658	0.502857	0.00005	0.00258735
ENSMUSG00000053483.13	Usp21	0.500353	0.00055	0.0152247
ENSMUSG00000007850.16	Hnrnp1	0.499387	0.0003	0.0100619
ENSMUSG00000041354.15	Rgl2	0.498781	0.0002	0.00775413
ENSMUSG00000030432.12	Rpl28	0.492727	0.0008	0.0195422
ENSMUSG00000005682.8	Pan2	0.491977	0.00005	0.00258735
ENSMUSG00000024299.16	Adamts10	0.491331	0.00265	0.0418911
ENSMUSG00000029027.8	Dffb	0.491116	0.0029	0.0445111
ENSMUSG00000004267.16	Eno2	0.490393	0.00005	0.00258735
ENSMUSG000000083563.1	Gm13340	0.489016	0.00005	0.00258735
ENSMUSG000000050737.13	Ptges	0.488789	0.00285	0.0440101
ENSMUSG00000066640.11	Fbxl18	0.487948	0.0017	0.0314636
ENSMUSG00000059851.15	Suv420h2	0.487889	0.00025	0.00905571
ENSMUSG00000066861.14	Oas1g	0.486918	0.0016	0.0303665
ENSMUSG00000052415.5	Tchh	0.486191	0.003	0.0455497
ENSMUSG00000029823.16	Luc7l2	0.485365	0.00005	0.00258735
ENSMUSG00000045466.18	Zfp956	0.48265	0.00035	0.011149
ENSMUSG00000035759.3	Bbs10	0.482107	0.00005	0.00258735
ENSMUSG00000035713.15	Usp35	0.480921	0.00205	0.0356026
ENSMUSG00000070390.12	Nlrp1b	0.479022	0.0002	0.00775413
ENSMUSG00000021910.15	Nisch	0.476426	0.0004	0.0121904
ENSMUSG00000055436.18	Srsf11	0.473021	0.00005	0.00258735
ENSMUSG00000031389.17	Arhgap4	0.471822	0.00055	0.0152247
ENSMUSG00000010608.15	Rbm25	0.470201	0.00165	0.0308991
ENSMUSG00000074158.9	9830147E19Rik	0.469309	0.00025	0.00905571
ENSMUSG000000102813.1	Gm37795	0.469109	0.0001	0.00449574
ENSMUSG00000061028.7	Clasrp	0.468529	0.00065	0.0170615
ENSMUSG00000044813.15	Shb	0.467815	0.00225	0.038034
ENSMUSG00000046402.10	Rbp1	0.465523	0.00155	0.0298193
ENSMUSG00000036893.17	Ehmt1	0.465452	0.0027	0.04226
ENSMUSG00000030815.11	Phkg2	0.465267	0.00015	0.00627624
ENSMUSG00000058402.14	Zfp420	0.464812	0.0007	0.0179285
ENSMUSG00000055866.9	Per2	0.464561	0.00335	0.0488738
ENSMUSG00000059708.12	Akap17b	0.462488	0.0008	0.0195422
ENSMUSG00000037989.15	Wnk2	0.46211	0.0006	0.0160143
ENSMUSG00000029071.16	Dvl1	0.460179	0.00005	0.00258735
ENSMUSG00000095123.1	Gm21781	0.458661	0.0001	0.00449574
ENSMUSG00000011158.7	Brf1	0.457699	0.00005	0.00258735
ENSMUSG00000033434.15	Gtpbp6	0.455008	0.00185	0.0333632
ENSMUSG00000004561.14	Mettl17	0.454492	0.00145	0.0286788
ENSMUSG00000059939.13	9430015G10Rik	0.453997	0.00205	0.0356026
ENSMUSG00000072915.3	Gm12258	0.453352	0.00075	0.0188287
ENSMUSG00000024451.8	Arap3	0.449736	0.00345	0.0498167
ENSMUSG00000002910.10	Arrdc2	0.445131	0.00005	0.00258735
ENSMUSG00000095440.1	Figl2	0.444996	0.00005	0.00258735
ENSMUSG00000089726.2	Mir17hg	0.444745	0.0001	0.00449574
ENSMUSG00000020451.17	Limk2	0.443228	0.0014	0.0281287
ENSMUSG00000038831.16	Ralgs1	0.442767	0.00155	0.0298193
ENSMUSG00000034248.7	Slc25a37	0.441384	0.00005	0.00258735
ENSMUSG00000035597.18	Prpf39	0.441359	0.00015	0.00627624
ENSMUSG00000025145.13	Lrrc45	0.441074	0.0004	0.0121904

ENSMUSG00000029581.14	Fscn1	0.440778	0.00285	0.0440101
ENSMUSG00000044250.7	Pced1b	0.440646	0.00035	0.011149
ENSMUSG00000020156.16	Mum1	0.438181	0.00005	0.00258735
ENSMUSG00000002668.7	Dennd1c	0.437753	0.00005	0.00258735
ENSMUSG000000061589.14	Dot1l	0.435685	0.00005	0.00258735
ENSMUSG00000009741.14	Ubp1	0.433344	0.00005	0.00258735
ENSMUSG00000029060.17	Mib2	0.430117	0.00105	0.0236027
ENSMUSG00000006395.16	Hyi	0.429045	0.0005	0.0142449
ENSMUSG000000062822.7	4833420G17Rik	0.42756	0.00005	0.00258735
ENSMUSG000000015291.10	Gdi1	0.427125	0.00085	0.0203711
ENSMUSG00000070808.4	Gltscr1	0.427068	0.00005	0.00258735
ENSMUSG00000019763.11	Rmnd1	0.426601	0.00145	0.0286788
ENSMUSG00000078484.3	Klhl17	0.426501	0.0002	0.00775413
ENSMUSG00000002409.18	Dyrk1b	0.426141	0.0003	0.0100619
ENSMUSG000000037475.15	Thoc2	0.423424	0.0002	0.00775413
ENSMUSG00000028327.14	Stra6l	0.422783	0.00005	0.00258735
ENSMUSG00000036931.14	Nfkbid	0.421479	0.00005	0.00258735
ENSMUSG000000022617.14	Chkb	0.421004	0.00005	0.00258735
ENSMUSG000000031166.13	Wdr13	0.420997	0.00135	0.0276053
ENSMUSG000000091811.2	Inafm1	0.420991	0.0004	0.0121904
ENSMUSG000000021327.18	Zkscan3	0.419777	0.00005	0.00258735
ENSMUSG000000039199.5	Zdhhc1	0.418494	0.0001	0.00449574
ENSMUSG000000025137.15	Pcvt2	0.416582	0.00065	0.0170615
ENSMUSG000000061898.10	Rbak	0.414295	0.00055	0.0152247
ENSMUSG000000029022.18	Miip	0.41385	0.00015	0.00627624
ENSMUSG000000023952.13	Gtpbp2	0.41292	0.00265	0.0418911
ENSMUSG000000032013.5	Trim29	0.412118	0.00005	0.00258735
ENSMUSG000000052512.17	Nav2	0.409736	0.0005	0.0142449
ENSMUSG000000049295.16	Zfp219	0.407324	0.00005	0.00258735
ENSMUSG00000013236.16	Ptprs	0.406992	0.00005	0.00258735
ENSMUSG000000022228.13	Zscan26	0.406506	0.00005	0.00258735
ENSMUSG000000020385.16	Clk4	0.406036	0.00055	0.0152247
ENSMUSG000000041235.11	Chd7	0.404886	0.0018	0.0328824
ENSMUSG000000039759.10	Thap3	0.404502	0.0015	0.0293926
ENSMUSG000000063511.11	Snrnp70	0.404319	0.0003	0.0100619
ENSMUSG000000020902.12	Ntn1	0.404148	0.00065	0.0170615
ENSMUSG000000045409.16	Trim39	0.40342	0.00005	0.00258735
ENSMUSG000000058761.5	Rnf169	0.401999	0.0001	0.00449574
ENSMUSG000000026630.9	Batf3	0.401924	0.0027	0.04226
ENSMUSG000000052563.13	D930048N14Rik	0.401241	0.0003	0.0100619
ENSMUSG000000036948.17	BC037034	0.401095	0.0003	0.0100619
ENSMUSG000000000204.15	Slfn4	0.397493	0.00155	0.0298193
ENSMUSG000000020770.13	Unk	0.397133	0.00165	0.0308991
ENSMUSG000000078942.10	Naip6	0.396315	0.00005	0.00258735
ENSMUSG000000022185.18	Acin1	0.395279	0.00255	0.0411309
ENSMUSG000000047617.11	BC029214	0.395134	0.00285	0.0440101
ENSMUSG000000001248.14	Gramd1a	0.393648	0.00005	0.00258735
ENSMUSG000000031295.13	Phka2	0.393297	0.00005	0.00258735
ENSMUSG000000025377.14	Enthd2	0.392105	0.00195	0.0348199
ENSMUSG000000040943.12	Tet2	0.392027	0.0001	0.00449574
ENSMUSG000000001173.15	Ocr1	0.391173	0.0002	0.00775413
ENSMUSG000000045639.14	Zfp629	0.390758	0.00075	0.0188287
ENSMUSG000000033819.15	Ppp1r16a	0.390599	0.00045	0.0132986
ENSMUSG000000075600.2	Zc3h3	0.390223	0.00065	0.0170615
ENSMUSG000000054648.7	Zfp869	0.389906	0.0013	0.0271076
ENSMUSG000000029068.16	Ccnl2	0.389895	0.00005	0.00258735
ENSMUSG000000054199.16	Gon4l	0.389149	0.0006	0.0160143
ENSMUSG000000045411.16	2410002F23Rik	0.388591	0.00075	0.0188287
ENSMUSG000000044037.15	Als2cl	0.388532	0.00125	0.0265008
ENSMUSG000000063952.15	Brpf3	0.386176	0.0027	0.04226
ENSMUSG000000085156.7	Snhg15	0.385137	0.002	0.035364
ENSMUSG000000024457.16	Trim26	0.385111	0.00005	0.00258735
ENSMUSG000000096687.7	Mfsd4b4	0.382918	0.0003	0.0100619
ENSMUSG000000030122.12	Ptms	0.382396	0.00085	0.0203711
ENSMUSG000000024137.8	E4f1	0.380453	0.00025	0.00905571
ENSMUSG000000042677.7	Zc3h12a	0.379537	0.00075	0.0188287

ENSMUSG00000069135.11	Fgfr1op	0.379102	0.0003	0.0100619
ENSMUSG00000042349.13	Ikbke	0.378942	0.0013	0.0271076
ENSMUSG00000023393.15	Slc17a9	0.374006	0.0012	0.0256986
ENSMUSG00000041268.16	Dmxl2	0.373039	0.00085	0.0203711
ENSMUSG00000052031.7	Tagap1	0.372173	0.00015	0.00627624
ENSMUSG00000072812.4	Ahna2	0.371072	0.00035	0.011149
ENSMUSG00000031921.17	Terf2	0.370429	0.001	0.0226798
ENSMUSG00000025086.12	Trub1	0.370117	0.00055	0.0152247
ENSMUSG00000023087.15	Noct	0.369088	0.0025	0.0405307
ENSMUSG00000079003.2	Samd1	0.368443	0.00005	0.00258735
ENSMUSG00000044712.15	Slc38a6	0.367927	0.00145	0.0286788
ENSMUSG00000032212.9	Sltm	0.366975	0.00005	0.00258735
ENSMUSG00000029389.17	Ddx55	0.364357	0.0005	0.0142449
ENSMUSG00000027615.14	Hps3	0.360117	0.00055	0.0152247
ENSMUSG00000024193.7	Phf1	0.359026	0.00025	0.00905571
ENSMUSG00000034160.13	Ogt	0.357576	0.0003	0.0100619
ENSMUSG00000026349.14	Ccnt2	0.356099	0.0008	0.0195422
ENSMUSG00000040123.16	Zmym5	0.354782	0.0004	0.0121904
ENSMUSG00000032519.11	Slc25a38	0.35452	0.0026	0.0414106
ENSMUSG00000042500.11	Ago4	0.354457	0.0002	0.00775413
ENSMUSG00000042548.13	Asx1	0.353287	0.0004	0.0121904
ENSMUSG00000000538.18	Tom1l2	0.351773	0.0014	0.0281287
ENSMUSG00000037355.14	Uvssa	0.351526	0.0005	0.0142449
ENSMUSG00000028911.16	Srsf4	0.350223	0.0001	0.00449574
ENSMUSG00000060301.5	2610008E11Rik	0.348856	0.00135	0.0276053
ENSMUSG00000033909.17	Usp36	0.347101	0.0014	0.0281287
ENSMUSG00000042439.12	Zfp532	0.346848	0.00155	0.0298193
ENSMUSG00000097392.2	D930016D06Rik	0.346195	0.0009	0.0212086
ENSMUSG00000038538.17	Ubn2	0.345111	0.00225	0.038034
ENSMUSG00000052760.15	A630001G21Rik	0.344354	0.0006	0.0160143
ENSMUSG00000018476.7	Kdm6b	0.343623	0.00185	0.0333632
ENSMUSG00000035051.14	Dhx57	0.343309	0.0021	0.0362229
ENSMUSG00000048174.2	Tmem81	0.342336	0.0026	0.0414106
ENSMUSG00000034820.3	Cpsf7	0.342137	0.00025	0.00905571
ENSMUSG00000022095.9	Fam160b2	0.340725	0.0004	0.0121904
ENSMUSG00000035697.14	Hmha1	0.340597	0.0003	0.0100619
ENSMUSG0000000759.14	Tubgcp3	0.340253	0.0016	0.0303665
ENSMUSG00000089762.3	Ier5l	0.340159	0.00065	0.0170615
ENSMUSG00000031508.14	Ankrd10	0.339988	0.0012	0.0256986
ENSMUSG00000053754.13	Chd8	0.339261	0.0024	0.0394646
ENSMUSG00000027466.15	Rbck1	0.338484	0.00035	0.011149
ENSMUSG00000063849.5	Ppcdc	0.338252	0.00125	0.0265008
ENSMUSG00000031805.17	Jak3	0.335811	0.00195	0.0348199
ENSMUSG00000046229.9	Scand1	0.335542	0.00025	0.00905571
ENSMUSG00000086290.8	Snhg12	0.332544	0.0027	0.04226
ENSMUSG00000016495.12	Plgrkt	0.332498	0.00065	0.0170615
ENSMUSG00000034379.8	Wdr5b	0.331539	0.0034	0.0493194
ENSMUSG00000030811.14	Fbxl19	0.33126	0.0022	0.0374384
ENSMUSG00000020994.4	Pnn	0.330798	0.00025	0.00905571
ENSMUSG00000026972.15	Arrdc1	0.330302	0.0019	0.0341193
ENSMUSG00000032643.12	Fhl3	0.32954	0.00055	0.0152247
ENSMUSG00000060862.9	Zbtb40	0.329323	0.00155	0.0298193
ENSMUSG00000038351.14	Sgsm2	0.329184	0.0032	0.0475054
ENSMUSG00000003847.16	Nfat5	0.328952	0.00155	0.0298193
ENSMUSG00000057649.5	Brd9	0.328915	0.00055	0.0152247
ENSMUSG00000054716.4	Zfp771	0.328878	0.00205	0.0356026
ENSMUSG00000021704.7	Mtx3	0.328275	0.0013	0.0271076
ENSMUSG00000052707.8	Tnrc6a	0.327659	0.00175	0.0321078
ENSMUSG00000031706.7	Rfx1	0.327197	0.00115	0.0251808
ENSMUSG00000032589.14	Bsn	0.325655	0.00135	0.0276053
ENSMUSG00000022529.11	Zfp263	0.325613	0.00035	0.011149
ENSMUSG00000034022.7	Cpsf1	0.325192	0.0021	0.0362229
ENSMUSG00000021820.16	Camk2g	0.325047	0.00045	0.0132986
ENSMUSG000000104960.1	Snhg8	0.324462	0.00315	0.0472053
ENSMUSG00000025158.7	Rfng	0.324318	0.0013	0.0271076
ENSMUSG00000041642.18	Kif21b	0.323781	0.0004	0.0121904

ENSMUSG00000045128.8	Rpl18a	0.323408	0.0007	0.0179285
ENSMUSG00000048279.17	Sacs	0.323124	0.00105	0.0236027
ENSMUSG00000031833.9	Mast3	0.320968	0.00065	0.0170615
ENSMUSG00000068917.12	Clk2	0.320287	0.0012	0.0256986
ENSMUSG00000022559.7	Fbxl6	0.319618	0.0011	0.0243808
ENSMUSG00000024045.5	Akap8	0.319536	0.00025	0.00905571
ENSMUSG00000037221.13	Mospd3	0.31899	0.0009	0.0212086
ENSMUSG00000020150.13	Gamt	0.318412	0.0023	0.0386217
ENSMUSG00000022568.16	Scrib	0.316498	0.00195	0.0348199
ENSMUSG00000032329.3	Hmg20a	0.314712	0.0011	0.0243808
ENSMUSG00000057551.9	Zfp317	0.314612	0.00165	0.0308991
ENSMUSG00000040712.16	Camta2	0.314165	0.0003	0.0100619
ENSMUSG00000054312.6	Mrps21	0.313457	0.0006	0.0160143
ENSMUSG00000041215.15	Yeats2	0.312743	0.0032	0.0475054
ENSMUSG00000019987.8	Arg1	0.312581	0.00055	0.0152247
ENSMUSG00000030604.9	Zfp626	0.310139	0.00215	0.0368347
ENSMUSG00000027569.15	Mrgbp	0.308752	0.00115	0.0251808
ENSMUSG00000026436.15	Elk4	0.30285	0.0026	0.0414106
ENSMUSG00000064043.13	Trerf1	0.302754	0.00245	0.0401306
ENSMUSG00000024188.15	Luc7l	0.30202	0.00325	0.047911
ENSMUSG00000028060.14	2810403A07Rik	0.29978	0.0006	0.0160143
ENSMUSG00000063286.7	Gm8995	0.299401	0.002	0.035364
ENSMUSG00000020806.15	Rhbdf2	0.298886	0.0022	0.0374384
ENSMUSG00000021453.2	Gadd45g	0.298356	0.0007	0.0179285
ENSMUSG00000021819.10	Zswim8	0.298247	0.00065	0.0170615
ENSMUSG00000013858.14	Tmem259	0.296888	0.0013	0.0271076
ENSMUSG00000042404.16	Dennd4b	0.296484	0.0024	0.0394646
ENSMUSG00000026544.6	Dusp23	0.29605	0.0015	0.0293926
ENSMUSG00000035711.4	Dok3	0.295193	0.0006	0.0160143
ENSMUSG00000035762.10	Tmem161b	0.294605	0.00305	0.0460881
ENSMUSG00000041164.15	Zmiz2	0.294363	0.00125	0.0265008
ENSMUSG00000049422.6	Chchd10	0.294325	0.0012	0.0256986
ENSMUSG00000027580.17	Helz2	0.293739	0.00335	0.0488738
ENSMUSG00000037907.16	Ankrd13b	0.29315	0.0012	0.0256986
ENSMUSG00000033020.6	Polr2f	0.292936	0.0011	0.0243808
ENSMUSG00000001918.17	Slc1a5	0.292262	0.002	0.035364
ENSMUSG0000002028.12	Kmt2a	0.291713	0.0009	0.0212086
ENSMUSG00000029817.11	Tra2a	0.291	0.00175	0.0321078
ENSMUSG00000001034.17	Mapk7	0.288695	0.0023	0.0386217
ENSMUSG00000025144.17	Stra13	0.288484	0.0017	0.0314636
ENSMUSG00000038342.15	Mlxip	0.288018	0.0022	0.0374384
ENSMUSG00000024856.10	Cdk2ap2	0.287504	0.00155	0.0298193
ENSMUSG00000042675.15	Ypel3	0.283558	0.00325	0.047911
ENSMUSG00000038406.17	Scaf1	0.282424	0.00305	0.0460881
ENSMUSG00000067288.12	Rps28	0.282097	0.00185	0.0333632
ENSMUSG00000090247.7	Bloc1s1	0.279206	0.00205	0.0356026
ENSMUSG00000033106.5	Slc7a6os	0.277417	0.0033	0.0485353
ENSMUSG00000028936.15	Rpl22	0.275213	0.00295	0.0450604
ENSMUSG00000034157.12	Cipc	0.271187	0.0026	0.0414106
ENSMUSG00000055065.6	Ddx17	0.270191	0.00295	0.0450604
ENSMUSG00000068758.7	Il3ra	0.269108	0.00265	0.0418911
ENSMUSG00000031765.7	Mt1	0.267296	0.0014	0.0281287
ENSMUSG00000022263.9	Trio	0.26239	0.00285	0.0440101
ENSMUSG00000055943.5	Emc7	-0.259959	0.0034	0.0493194
ENSMUSG00000041781.8	Cpsf2	-0.260727	0.0034	0.0493194
ENSMUSG00000021024.14	Psma6	-0.261319	0.00345	0.0498167
ENSMUSG00000033047.4	Eif3l	-0.261976	0.0034	0.0493194
ENSMUSG00000021003.9	Galc	-0.262079	0.0027	0.04226
ENSMUSG00000041958.10	Pigs	-0.262644	0.00265	0.0418911
ENSMUSG00000024679.10	Ms4a6d	-0.263737	0.00275	0.0429366
ENSMUSG00000024740.9	Ddb1	-0.26391	0.0031	0.0466214
ENSMUSG00000027775.9	Mfsd1	-0.26537	0.0029	0.0445111
ENSMUSG00000006373.10	Pgrmc1	-0.266901	0.00235	0.0389965
ENSMUSG00000019814.4	Ltv1	-0.267139	0.00335	0.0488738
ENSMUSG00000024981.5	Acs15	-0.267683	0.0024	0.0394646
ENSMUSG00000046434.15	Hnrnpa1	-0.268078	0.00235	0.0389965

ENSMUSG00000070923.4	Klh9	-0.268888	0.00205	0.0356026
ENSMUSG00000050912.15	Tmem123	-0.269675	0.0025	0.0405307
ENSMUSG00000022533.13	Atp13a3	-0.270466	0.00245	0.0401306
ENSMUSG00000022912.8	Pros1	-0.270499	0.0023	0.0386217
ENSMUSG00000024614.6	Tmx3	-0.270993	0.00185	0.0333632
ENSMUSG00000026781.15	Acbd5	-0.272405	0.00235	0.0389965
ENSMUSG00000044408.6	Sptssa	-0.272574	0.00215	0.0368347
ENSMUSG00000027822.16	Slc33a1	-0.272833	0.00265	0.0418911
ENSMUSG00000020592.14	Sdc1	-0.273594	0.0029	0.0445111
ENSMUSG00000046841.4	Ckap4	-0.273775	0.00165	0.0308991
ENSMUSG00000031165.6	Was	-0.274809	0.00205	0.0356026
ENSMUSG00000045679.13	Pqlc3	-0.275022	0.00175	0.0321078
ENSMUSG00000021108.17	Prkch	-0.275429	0.00265	0.0418911
ENSMUSG00000031337.16	Mtm1	-0.277104	0.0032	0.0475054
ENSMUSG00000051695.6	Pcbp1	-0.278097	0.0026	0.0414106
ENSMUSG00000018822.7	Sfrp5	-0.278842	0.00205	0.0356026
ENSMUSG00000020075.7	Ddx21	-0.279205	0.0015	0.0293926
ENSMUSG00000029634.15	Rnf6	-0.279334	0.00325	0.047911
ENSMUSG00000020720.13	Psmd12	-0.279853	0.0014	0.0281287
ENSMUSG00000022797.15	Tfrc	-0.279968	0.00295	0.0450604
ENSMUSG00000061119.7	Prcp	-0.280127	0.0019	0.0341193
ENSMUSG00000022867.9	Usp25	-0.280964	0.0017	0.0314636
ENSMUSG00000020120.15	Plek	-0.281061	0.0028	0.0435563
ENSMUSG00000037851.13	Iars	-0.282093	0.0032	0.0475054
ENSMUSG00000046079.16	Lrrc8d	-0.282343	0.00135	0.0276053
ENSMUSG00000028419.5	Chmp5	-0.283542	0.002	0.035364
ENSMUSG00000030275.6	Etnk1	-0.284648	0.00235	0.0389965
ENSMUSG00000024991.7	Eif3a	-0.284764	0.0022	0.0374384
ENSMUSG00000021686.4	Ap3b1	-0.284845	0.00155	0.0298193
ENSMUSG00000015750.15	Aph1a	-0.284951	0.0025	0.0405307
ENSMUSG00000019731.13	Slc35e1	-0.285369	0.00165	0.0308991
ENSMUSG00000027782.10	Kpna4	-0.28587	0.0025	0.0405307
ENSMUSG00000009630.10	Ppp2cb	-0.286176	0.0016	0.0303665
ENSMUSG00000064289.15	Tank	-0.286412	0.00195	0.0348199
ENSMUSG00000029038.9	Ssu72	-0.286479	0.0033	0.0485353
ENSMUSG00000022305.12	Lrp12	-0.28687	0.0016	0.0303665
ENSMUSG00000031167.16	Rbm3	-0.286997	0.0012	0.0256986
ENSMUSG00000061232.15	H2-K1	-0.287593	0.00225	0.038034
ENSMUSG00000038774.8	Ascc3	-0.28775	0.00275	0.0429366
ENSMUSG00000024098.5	Twsg1	-0.28834	0.00245	0.0401306
ENSMUSG00000027287.14	Snap23	-0.288727	0.00345	0.0498167
ENSMUSG00000063410.7	Stk24	-0.288991	0.0013	0.0271076
ENSMUSG00000027342.14	Pcna	-0.289118	0.0012	0.0256986
ENSMUSG00000073639.5	Rab18	-0.289192	0.00135	0.0276053
ENSMUSG00000047379.6	B4gat1	-0.289386	0.00325	0.047911
ENSMUSG00000011179.7	Odc1	-0.289525	0.0021	0.0362229
ENSMUSG00000036580.15	Spg20	-0.289591	0.0016	0.0303665
ENSMUSG00000020495.13	Smg8	-0.289639	0.0032	0.0475054
ENSMUSG00000037458.14	Azin1	-0.290545	0.00205	0.0356026
ENSMUSG00000032763.10	Ilvbl	-0.290879	0.00255	0.0411309
ENSMUSG00000030220.13	Arhgdib	-0.290993	0.00145	0.0286788
ENSMUSG00000021814.16	Anxa7	-0.291828	0.0012	0.0256986
ENSMUSG00000032112.9	Trappc4	-0.2924	0.0029	0.0445111
ENSMUSG00000040550.16	Otud6b	-0.29247	0.00135	0.0276053
ENSMUSG00000051579.10	Tceal8	-0.292645	0.0018	0.0328824
ENSMUSG00000024218.12	Taf11	-0.293154	0.0031	0.0466214
ENSMUSG00000006304.14	Arpc2	-0.294053	0.00185	0.0333632
ENSMUSG00000001833.16	Septin7	-0.294218	0.00085	0.0203711
ENSMUSG00000024487.4	Yipf5	-0.29491	0.0012	0.0256986
ENSMUSG00000054693.14	Adam10	-0.295678	0.0007	0.0179285
ENSMUSG00000031095.15	Cul4b	-0.295885	0.00325	0.047911
ENSMUSG00000025037.6	Maoa	-0.295927	0.0014	0.0281287
ENSMUSG00000022314.9	Rad21	-0.296677	0.0007	0.0179285
ENSMUSG00000023186.14	Vwa5a	-0.297178	0.00115	0.0251808
ENSMUSG00000029840.8	Mtpn	-0.298449	0.00085	0.0203711
ENSMUSG00000027698.14	Nceh1	-0.298889	0.00175	0.0321078

ENSMUSG00000022339.8	Ebag9	-0.299269	0.0027	0.04226
ENSMUSG00000032349.13	Elov15	-0.29941	0.0013	0.0271076
ENSMUSG00000023025.15	Larp4	-0.299429	0.0009	0.0212086
ENSMUSG00000015839.6	Nfe212	-0.301353	0.001	0.0226798
ENSMUSG00000026223.15	Itm2c	-0.301775	0.001	0.0226798
ENSMUSG00000034158.9	Lrrc58	-0.302005	0.0008	0.0195422
ENSMUSG00000025647.16	Shisa5	-0.30248	0.001	0.0226798
ENSMUSG00000032412.8	Atp1b3	-0.30288	0.0009	0.0212086
ENSMUSG00000049339.16	Fam134a	-0.302988	0.0021	0.0362229
ENSMUSG00000031353.13	Rbbp7	-0.303088	0.0025	0.0405307
ENSMUSG00000031197.11	Vbp1	-0.303889	0.00135	0.0276053
ENSMUSG00000024759.13	Atl3	-0.304808	0.00075	0.0188287
ENSMUSG00000068798.10	Rap1a	-0.30521	0.00215	0.0368347
ENSMUSG00000026377.12	Nifk	-0.305524	0.0008	0.0195422
ENSMUSG00000036155.13	Mgat5	-0.305666	0.0006	0.0160143
ENSMUSG00000038646.13	Fam103a1	-0.306391	0.00105	0.0236027
ENSMUSG00000043832.13	Clec4a3	-0.306711	0.0011	0.0243808
ENSMUSG00000021592.15	Arsk	-0.306753	0.0024	0.0394646
ENSMUSG00000041891.15	Lman1	-0.307426	0.001	0.0226798
ENSMUSG00000059586.9	Nsmce2	-0.307512	0.00055	0.0152247
ENSMUSG00000022200.7	Golph3	-0.30844	0.00035	0.011149
ENSMUSG00000054079.12	Utp18	-0.308489	0.001	0.0226798
ENSMUSG00000021094.9	Dhrs7	-0.308986	0.0007	0.0179285
ENSMUSG00000095115.2	Itpr12	-0.309192	0.0007	0.0179285
ENSMUSG00000032199.12	Polr2m	-0.309574	0.0008	0.0195422
ENSMUSG00000027068.6	Dhrs9	-0.309626	0.0005	0.0142449
ENSMUSG00000049516.9	Spty2d1	-0.310043	0.0005	0.0142449
ENSMUSG00000004843.6	Chmp2b	-0.31064	0.00035	0.011149
ENSMUSG00000029998.14	Pcyox1	-0.311046	0.0004	0.0121904
ENSMUSG00000032050.16	Rdx	-0.311564	0.0006	0.0160143
ENSMUSG00000093904.1	Tommm20	-0.3117	0.0005	0.0142449
ENSMUSG00000018217.12	Pmp22	-0.312013	0.00035	0.011149
ENSMUSG00000052656.12	Rnf103	-0.312283	0.00155	0.0298193
ENSMUSG00000061666.6	Gdpd1	-0.312687	0.00145	0.0286788
ENSMUSG00000027108.15	Ola1	-0.313261	0.0012	0.0256986
ENSMUSG00000020841.5	Cpd	-0.313264	0.0004	0.0121904
ENSMUSG00000032440.12	Tgfb2	-0.313467	0.0001	0.00449574
ENSMUSG00000030105.8	Arl8b	-0.313927	0.00045	0.0132986
ENSMUSG00000029076.14	Sdf4	-0.313977	0.0014	0.0281287
ENSMUSG00000023075.9	Akirin1	-0.314077	0.00045	0.0132986
ENSMUSG00000032359.14	Ctsh	-0.314918	0.0017	0.0314636
ENSMUSG00000042042.14	Csgalnact2	-0.315234	0.0006	0.0160143
ENSMUSG00000043252.8	Tmem64	-0.315494	0.00235	0.0389965
ENSMUSG00000058254.12	Tspan7	-0.315507	0.0012	0.0256986
ENSMUSG00000021072.12	Tmx1	-0.316059	0.00205	0.0356026
ENSMUSG00000024072.8	Yipf4	-0.316209	0.0008	0.0195422
ENSMUSG00000059089.4	Fcgr4	-0.316908	0.0005	0.0142449
ENSMUSG00000045594.9	Glb1	-0.316919	0.00335	0.0488738
ENSMUSG00000039270.9	Megf9	-0.316998	0.0027	0.04226
ENSMUSG00000008763.16	Man1a2	-0.317361	0.0014	0.0281287
ENSMUSG00000053128.14	Rnf26	-0.317654	0.00335	0.0488738
ENSMUSG00000025915.14	Sgk3	-0.319092	0.00125	0.0265008
ENSMUSG00000038622.7	Med30	-0.319487	0.00235	0.0389965
ENSMUSG00000030659.14	Nucb2	-0.320029	0.00025	0.00905571
ENSMUSG00000022663.3	Atg3	-0.320925	0.0004	0.0121904
ENSMUSG00000021831.8	Ero1l	-0.320971	0.0006	0.0160143
ENSMUSG00000074785.4	Pixnc1	-0.32215	0.00045	0.0132986
ENSMUSG00000055782.8	Abcd2	-0.322779	0.00175	0.0321078
ENSMUSG00000016541.9	Atxn10	-0.322841	0.00025	0.00905571
ENSMUSG00000028173.10	Wls	-0.323053	0.00085	0.0203711
ENSMUSG00000022403.14	St13	-0.323236	0.00135	0.0276053
ENSMUSG00000027809.14	Etfdh	-0.323606	0.0015	0.0293926
ENSMUSG00000040451.17	Sgms1	-0.323768	0.0005	0.0142449
ENSMUSG00000022664.11	Slc35a5	-0.324119	0.00085	0.0203711
ENSMUSG00000029338.13	Antxr2	-0.324286	0.0003	0.0100619
ENSMUSG00000020130.8	Tbc1d15	-0.324594	0.0004	0.0121904

ENSMUSG00000037370.13	Enpp1	-0.324612	0.0026	0.0414106
ENSMUSG00000047139.8	Cd24a	-0.324866	0.00115	0.0251808
ENSMUSG00000000420.15	Galnt1	-0.325063	0.0003	0.0100619
ENSMUSG00000022234.14	Cct5	-0.325859	0.0001	0.00449574
ENSMUSG00000021811.6	Dnajc9	-0.3259	0.00215	0.0368347
ENSMUSG00000027534.16	Snx16	-0.326448	0.00115	0.0251808
ENSMUSG00000016206.6	H2-M3	-0.327859	0.00165	0.0308991
ENSMUSG00000031647.10	Mfap3l	-0.328959	0.00145	0.0286788
ENSMUSG00000049409.9	Prokr1	-0.329384	0.00125	0.0265008
ENSMUSG00000029253.12	Cenpc1	-0.329464	0.0017	0.0314636
ENSMUSG00000079037.9	Prnp	-0.329665	0.00025	0.00905571
ENSMUSG0000001942.7	Siae	-0.329768	0.0011	0.0243808
ENSMUSG00000029569.9	Tmem168	-0.330408	0.0002	0.00775413
ENSMUSG00000037075.6	Rnf139	-0.330663	0.00215	0.0368347
ENSMUSG00000004383.17	Large	-0.330956	0.00035	0.011149
ENSMUSG00000022329.14	Stk3	-0.331686	0.00025	0.00905571
ENSMUSG00000053012.17	Krcc1	-0.332079	0.00015	0.00627624
ENSMUSG000000062082.16	Cd200r4	-0.332308	0.0002	0.00775413
ENSMUSG00000025203.5	Scd2	-0.332794	0.00015	0.00627624
ENSMUSG00000051185.9	Fam174a	-0.333036	0.0003	0.0100619
ENSMUSG00000041084.8	Ostc	-0.333835	0.0003	0.0100619
ENSMUSG00000067336.6	Bmpr2	-0.334625	0.00035	0.011149
ENSMUSG00000037949.7	Ano10	-0.334854	0.0011	0.0243808
ENSMUSG00000003316.14	Glg1	-0.334874	0.00035	0.011149
ENSMUSG00000040747.9	Cd53	-0.335027	0.00235	0.0389965
ENSMUSG00000051675.13	Trim32	-0.33534	0.00165	0.0308991
ENSMUSG00000021248.8	Tmed10	-0.336553	0.0003	0.0100619
ENSMUSG00000041439.15	Mfsd6	-0.337164	0.00075	0.0188287
ENSMUSG00000027195.10	Hsd17b12	-0.337639	0.0011	0.0243808
ENSMUSG00000022742.5	Cpox	-0.338531	0.00045	0.0132986
ENSMUSG00000073139.9	BCO23829	-0.338838	0.00115	0.0251808
ENSMUSG00000033557.17	Fam20b	-0.339396	0.0002	0.00775413
ENSMUSG00000040520.7	Manea	-0.339589	0.0002	0.00775413
ENSMUSG00000020101.14	Vsir	-0.340474	0.0007	0.0179285
ENSMUSG00000021665.7	Hexb	-0.340511	0.0005	0.0142449
ENSMUSG00000038212.15	Mfsd14b	-0.340723	0.00015	0.00627624
ENSMUSG00000035847.15	Ids	-0.341298	0.00005	0.00258735
ENSMUSG00000026356.15	Dars	-0.341874	0.00015	0.00627624
ENSMUSG00000000340.10	Dbt	-0.342451	0.0004	0.0121904
ENSMUSG00000032328.12	Tmem30a	-0.34249	0.0001	0.00449574
ENSMUSG00000032459.9	Mrps22	-0.343013	0.0012	0.0256986
ENSMUSG00000028557.10	Rnf11	-0.3432	0.0025	0.0405307
ENSMUSG00000021929.8	Kpna3	-0.343937	0.0001	0.00449574
ENSMUSG00000022378.13	Fam49b	-0.34433	0.00035	0.011149
ENSMUSG00000020432.12	Tcn2	-0.344374	0.0001	0.00449574
ENSMUSG00000042369.8	Rbm45	-0.345689	0.00035	0.011149
ENSMUSG00000062949.13	Atp11c	-0.346138	0.00025	0.00905571
ENSMUSG00000031532.6	Saraf	-0.346333	0.0002	0.00775413
ENSMUSG00000028007.13	Snx7	-0.346505	0.00145	0.0286788
ENSMUSG00000031246.14	Sh3bgrl	-0.346645	0.0001	0.00449574
ENSMUSG00000030987.5	Stim1	-0.347428	0.0003	0.0100619
ENSMUSG00000035150.15	Eif2s3x	-0.348048	0.0032	0.0475054
ENSMUSG0000001281.9	Itgb7	-0.348197	0.00005	0.00258735
ENSMUSG00000050148.9	Ubqln2	-0.348617	0.00005	0.00258735
ENSMUSG00000026727.10	Rsu1	-0.348654	0.0001	0.00449574
ENSMUSG00000026116.11	Tmem131	-0.34964	0.0011	0.0243808
ENSMUSG00000028517.8	Plpp3	-0.349729	0.00005	0.00258735
ENSMUSG00000025823.9	Pdia4	-0.349755	0.0002	0.00775413
ENSMUSG00000031333.7	Abcb7	-0.349804	0.00025	0.00905571
ENSMUSG00000024785.6	Rcl1	-0.349836	0.00255	0.0411309
ENSMUSG00000074280.5	Gm6166	-0.350058	0.0005	0.0142449
ENSMUSG00000020386.5	Sar1b	-0.350195	0.00015	0.00627624
ENSMUSG00000063895.6	Nupl1	-0.350368	0.001	0.0226798
ENSMUSG00000019818.15	Cd164	-0.350494	0.0001	0.00449574
ENSMUSG00000033207.6	Mamdc2	-0.351174	0.0002	0.00775413
ENSMUSG00000024507.6	Hsd17b4	-0.351816	0.0028	0.0435563

ENSMUSG00000029672.16	Fam3c	-0.352147	0.0007	0.0179285
ENSMUSG00000021871.17	Pnp	-0.353294	0.00095	0.0220588
ENSMUSG00000062585.11	Cnr2	-0.353304	0.0003	0.0100619
ENSMUSG00000003721.14	Insig2	-0.35411	0.003	0.0455497
ENSMUSG00000043895.5	S1pr2	-0.354333	0.00025	0.00905571
ENSMUSG00000024601.8	Isoc1	-0.354934	0.00095	0.0220588
ENSMUSG00000031007.2	Atp6ap2	-0.3555	0.00015	0.00627624
ENSMUSG00000026980.15	Ly75	-0.355541	0.001	0.0226798
ENSMUSG00000061273.3	Mmgt1	-0.355599	0.00015	0.00627624
ENSMUSG00000039202.12	Abhd2	-0.355735	0.0005	0.0142449
ENSMUSG00000032475.15	Nck1	-0.355867	0.0012	0.0256986
ENSMUSG00000039497.7	Dse	-0.356458	0.0001	0.00449574
ENSMUSG00000038147.13	Cd84	-0.357495	0.0013	0.0271076
ENSMUSG00000026775.9	Yme11	-0.357587	0.00005	0.00258735
ENSMUSG00000013662.5	Atad1	-0.357685	0.00005	0.00258735
ENSMUSG00000022514.14	Il1rap	-0.358564	0.003	0.0455497
ENSMUSG00000039395.8	Mreg	-0.358747	0.00165	0.0308991
ENSMUSG00000028098.13	Rnf115	-0.358839	0.0001	0.00449574
ENSMUSG00000033793.12	Atp6v1h	-0.358842	0.00005	0.00258735
ENSMUSG00000026012.2	Cd28	-0.358918	0.0001	0.00449574
ENSMUSG00000040158.12	Tax1bp3	-0.359557	0.0019	0.0341193
ENSMUSG00000014177.10	Tvp23b	-0.360031	0.00045	0.0132986
ENSMUSG00000024896.8	Minpp1	-0.361317	0.00025	0.00905571
ENSMUSG00000078427.2	Sarnp	-0.361889	0.00025	0.00905571
ENSMUSG00000019782.9	Rwdd1	-0.362458	0.00015	0.00627624
ENSMUSG00000074825.4	Itpril1	-0.36309	0.0025	0.0405307
ENSMUSG00000038179.13	Slamf7	-0.363468	0.00045	0.0132986
ENSMUSG00000027995.10	Tlr2	-0.363899	0.0026	0.0414106
ENSMUSG00000008540.11	Mgst1	-0.36399	0.00015	0.00627624
ENSMUSG00000022136.7	Dnajc3	-0.364115	0.00005	0.00258735
ENSMUSG00000037434.7	Slc30a1	-0.364568	0.00005	0.00258735
ENSMUSG00000029426.8	Scarb2	-0.364799	0.00005	0.00258735
ENSMUSG00000060090.16	Rp2	-0.364928	0.00015	0.00627624
ENSMUSG00000015932.8	Dstn	-0.36703	0.00005	0.00258735
ENSMUSG00000027366.12	Sppl2a	-0.367535	0.002	0.035364
ENSMUSG00000042712.10	Wbp5	-0.367738	0.00005	0.00258735
ENSMUSG00000033863.1	Klf9	-0.368354	0.00055	0.0152247
ENSMUSG00000029781.7	Fkbp9	-0.368467	0.00045	0.0132986
ENSMUSG00000066441.14	Rdh11	-0.36924	0.00005	0.00258735
ENSMUSG00000020048.13	Hsp90b1	-0.371044	0.0003	0.0100619
ENSMUSG00000031608.13	Galnt7	-0.37263	0.0001	0.00449574
ENSMUSG00000062070.12	Pgk1	-0.373352	0.00005	0.00258735
ENSMUSG00000037071.2	Scd1	-0.37379	0.00045	0.0132986
ENSMUSG00000030613.13	Ccdc90b	-0.37406	0.0004	0.0121904
ENSMUSG00000022257.3	Laptn4b	-0.374818	0.0009	0.0212086
ENSMUSG00000031604.10	Msmo1	-0.374852	0.00015	0.00627624
ENSMUSG00000055639.16	Dach1	-0.375457	0.00125	0.0265008
ENSMUSG00000019966.17	Kitl	-0.375544	0.001	0.0226798
ENSMUSG00000009207.15	Lnp	-0.375553	0.0006	0.0160143
ENSMUSG00000015854.7	Cd5l	-0.375955	0.00005	0.00258735
ENSMUSG00000062078.14	Qk	-0.376398	0.00005	0.00258735
ENSMUSG00000028383.17	Hsd1l2	-0.376594	0.0001	0.00449574
ENSMUSG00000059447.13	Hadhb	-0.376745	0.00005	0.00258735
ENSMUSG00000067591.12	Klra3	-0.376851	0.00315	0.0472053
ENSMUSG00000029250.5	Polr2b	-0.376927	0.0022	0.0374384
ENSMUSG00000036764.11	Dnajc12	-0.377043	0.0016	0.0303665
ENSMUSG00000021109.13	Hif1a	-0.377719	0.0001	0.00449574
ENSMUSG00000035164.7	Zc3h12c	-0.38003	0.0032	0.0475054
ENSMUSG00000029767.16	Calu	-0.380567	0.00005	0.00258735
ENSMUSG00000033953.10	Ppp3r1	-0.38224	0.00075	0.0188287
ENSMUSG00000072235.5	Tuba1a	-0.38428	0.00025	0.00905571
ENSMUSG00000030786.18	Itgam	-0.384339	0.00005	0.00258735
ENSMUSG00000023921.8	Mut	-0.385371	0.00005	0.00258735
ENSMUSG00000031521.5	Aga	-0.385534	0.00005	0.00258735
ENSMUSG00000020077.14	Srgn	-0.385788	0.0001	0.00449574
ENSMUSG00000010517.7	Faf1	-0.38602	0.0016	0.0303665

ENSMUSG00000022110.13	Sucla2	-0.386277	0.0014	0.0281287
ENSMUSG00000045237.5	1110012L19Rik	-0.38633	0.00045	0.0132986
ENSMUSG00000030208.15	Emp1	-0.386647	0.00005	0.00258735
ENSMUSG00000043019.12	Edem3	-0.388017	0.00005	0.00258735
ENSMUSG00000035372.1	1810055G02Rik	-0.388668	0.0023	0.0386217
ENSMUSG00000046324.12	Ermp1	-0.389308	0.0004	0.0121904
ENSMUSG00000022892.10	App	-0.389837	0.00005	0.00258735
ENSMUSG00000066324.2	Impad1	-0.390033	0.00005	0.00258735
ENSMUSG00000032965.10	Ift57	-0.390291	0.00335	0.0488738
ENSMUSG00000017057.9	Il13ra1	-0.39076	0.00005	0.00258735
ENSMUSG00000024074.7	Crim1	-0.391183	0.0013	0.0271076
ENSMUSG00000020091.14	Eif4ebp2	-0.391313	0.00205	0.0356026
ENSMUSG00000021213.11	Akr1c13	-0.391852	0.0003	0.0100619
ENSMUSG00000063800.5	Prpf38a	-0.393238	0.0005	0.0142449
ENSMUSG00000011752.6	Pgam1	-0.394121	0.00005	0.00258735
ENSMUSG00000030096.8	Slc6a6	-0.394469	0.0001	0.00449574
ENSMUSG00000022876.17	Samsn1	-0.395051	0.00115	0.0251808
ENSMUSG00000060147.15	Serpina6a	-0.395345	0.00045	0.0132986
ENSMUSG00000020585.4	Laptm4a	-0.395473	0.00005	0.00258735
ENSMUSG00000029915.14	Clec5a	-0.39587	0.00015	0.00627624
ENSMUSG00000028111.4	Ctsk	-0.397706	0.00015	0.00627624
ENSMUSG00000071855.4	Ccdc112	-0.400304	0.0018	0.0328824
ENSMUSG00000031696.9	Vps35	-0.401001	0.00005	0.00258735
ENSMUSG00000078945.10	Naip2	-0.401369	0.00005	0.00258735
ENSMUSG00000033964.12	Zbtb41	-0.40154	0.00035	0.011149
ENSMUSG00000024085.13	Man2a1	-0.401778	0.00005	0.00258735
ENSMUSG00000019948.3	Actr6	-0.403059	0.001	0.0226798
ENSMUSG00000079293.11	Clec7a	-0.403212	0.0001	0.00449574
ENSMUSG00000021190.14	Lgmn	-0.404262	0.0004	0.0121904
ENSMUSG00000050786.8	Ccdc126	-0.406385	0.00185	0.0333632
ENSMUSG00000016534.15	Lamp2	-0.406979	0.00015	0.00627624
ENSMUSG00000020952.9	Scfd1	-0.40731	0.0001	0.00449574
ENSMUSG00000000787.12	Ddx3x	-0.408048	0.00005	0.00258735
ENSMUSG00000049439.13	Cyp20a1	-0.408969	0.0002	0.00775413
ENSMUSG00000011114.17	Tbrg1	-0.409124	0.00005	0.00258735
ENSMUSG00000047881.14	Rell1	-0.409809	0.00005	0.00258735
ENSMUSG00000035840.6	Lysmd3	-0.410315	0.00155	0.0298193
ENSMUSG00000032667.17	Pon2	-0.410608	0.00005	0.00258735
ENSMUSG00000018927.3	Ccl6	-0.411601	0.0001	0.00449574
ENSMUSG00000022667.17	Cd200r1	-0.411947	0.00005	0.00258735
ENSMUSG00000039005.13	Tlr4	-0.412563	0.00005	0.00258735
ENSMUSG00000022757.18	Tfg	-0.412758	0.00005	0.00258735
ENSMUSG00000038280.12	Ostm1	-0.413917	0.00005	0.00258735
ENSMUSG00000026094.14	Stk17b	-0.415601	0.00005	0.00258735
ENSMUSG00000022255.15	Mtdh	-0.417988	0.0003	0.0100619
ENSMUSG00000025544.13	Tm9sf2	-0.418672	0.00005	0.00258735
ENSMUSG00000029366.10	Dck	-0.420133	0.00085	0.0203711
ENSMUSG00000029571.14	Tmem106b	-0.420371	0.00005	0.00258735
ENSMUSG00000046186.8	Cd109	-0.420411	0.00005	0.00258735
ENSMUSG00000052914.4	Cyp2j6	-0.420732	0.00035	0.011149
ENSMUSG00000046873.18	Mbtps2	-0.421687	0.00005	0.00258735
ENSMUSG00000021116.9	Eif2s1	-0.421782	0.00005	0.00258735
ENSMUSG00000027828.12	Ssr3	-0.422765	0.00005	0.00258735
ENSMUSG00000025809.15	Itgb1	-0.424834	0.00005	0.00258735
ENSMUSG00000022722.18	Arl6	-0.426771	0.0008	0.0195422
ENSMUSG00000034723.11	Tmx4	-0.430825	0.00005	0.00258735
ENSMUSG00000103847.1	Gm20056	-0.43083	0.0002	0.00775413
ENSMUSG00000025804.4	Ccr1	-0.431147	0.00005	0.00258735
ENSMUSG00000029836.15	Cbx3	-0.432562	0.00145	0.0286788
ENSMUSG00000024378.9	Stard4	-0.432577	0.00075	0.0188287
ENSMUSG00000021065.15	Fut8	-0.433182	0.00005	0.00258735
ENSMUSG00000024425.3	Ndfip1	-0.435169	0.00005	0.00258735
ENSMUSG00000045092.8	S1pr1	-0.436563	0.00005	0.00258735
ENSMUSG00000038844.8	Kif16b	-0.437226	0.0009	0.0212086
ENSMUSG00000000001.4	Gnai3	-0.437419	0.00005	0.00258735
ENSMUSG00000029265.4	Dr1	-0.438904	0.00005	0.00258735

ENSMUSG00000021866.15	Anxa11	-0.438956	0.00005	0.00258735
ENSMUSG00000017707.9	Serinc3	-0.439101	0.00005	0.00258735
ENSMUSG000000056429.4	Tgoln1	-0.439593	0.00005	0.00258735
ENSMUSG000000043998.10	Mgat2	-0.441046	0.00005	0.00258735
ENSMUSG000000020571.12	Pdia6	-0.441169	0.00005	0.00258735
ENSMUSG000000035561.5	Aldh1b1	-0.441849	0.00005	0.00258735
ENSMUSG000000025531.14	Chm	-0.442254	0.00005	0.00258735
ENSMUSG000000022003.6	Slc25a30	-0.44473	0.00235	0.0389965
ENSMUSG000000026342.10	Slc35f5	-0.448135	0.00005	0.00258735
ENSMUSG000000059588.13	Calcr1	-0.449945	0.0002	0.00775413
ENSMUSG000000052738.14	Suclg1	-0.450026	0.00005	0.00258735
ENSMUSG000000026986.14	Hnmt	-0.45104	0.00005	0.00258735
ENSMUSG000000019796.12	Lrp11	-0.453677	0.0001	0.00449574
ENSMUSG000000101188.1	Eif4a-ps4	-0.453783	0.00005	0.00258735
ENSMUSG000000026365.15	Cfh	-0.456038	0.00005	0.00258735
ENSMUSG000000032252.14	Glce	-0.457293	0.0002	0.00775413
ENSMUSG000000026864.13	Hspa5	-0.45858	0.00005	0.00258735
ENSMUSG000000024121.13	Atp6v0c	-0.459986	0.00005	0.00258735
ENSMUSG000000002718.14	Cse1l	-0.460136	0.0034	0.0493195
ENSMUSG000000028270.12	Gbp2	-0.460988	0.00005	0.00258735
ENSMUSG000000053289.7	Ddx10	-0.461082	0.00005	0.00258735
ENSMUSG000000032932.14	Hspa13	-0.461095	0.00005	0.00258735
ENSMUSG000000038633.5	Degs1	-0.46173	0.00005	0.00258735
ENSMUSG000000082433.2	Gm9025	-0.462721	0.0007	0.0179285
ENSMUSG000000069515.5	Lyz1	-0.462821	0.00005	0.00258735
ENSMUSG000000028274.17	Rngtt	-0.463529	0.00005	0.00258735
ENSMUSG000000031703.8	Itfg1	-0.464557	0.00005	0.00258735
ENSMUSG000000019917.9	Sept10	-0.465852	0.0003	0.0100619
ENSMUSG000000021728.7	Emb	-0.467693	0.00005	0.00258735
ENSMUSG000000030560.17	Ctsc	-0.467694	0.00005	0.00258735
ENSMUSG000000042271.13	Nxt2	-0.469372	0.00005	0.00258735
ENSMUSG000000042684.8	Npl	-0.469555	0.0003	0.0100619
ENSMUSG000000052821.3	Cysltr1	-0.470871	0.0024	0.0394646
ENSMUSG000000022351.14	Sqle	-0.471421	0.00005	0.00258735
ENSMUSG000000053253.16	Ndfip2	-0.471635	0.00005	0.00258735
ENSMUSG000000020738.16	Sumo2	-0.471832	0.00005	0.00258735
ENSMUSG000000073987.4	Ggh	-0.472007	0.00005	0.00258735
ENSMUSG000000039197.9	Adk	-0.472059	0.00005	0.00258735
ENSMUSG000000025986.6	Slc39a10	-0.472174	0.00005	0.00258735
ENSMUSG000000062270.13	Morf4l1	-0.480108	0.00005	0.00258735
ENSMUSG000000020368.15	Canx	-0.481378	0.00005	0.00258735
ENSMUSG000000084159.1	Gm12696	-0.48204	0.0006	0.0160143
ENSMUSG000000016319.3	Slc25a5	-0.485087	0.00005	0.00258735
ENSMUSG000000054404.12	Slfm5	-0.486071	0.00005	0.00258735
ENSMUSG000000054843.8	Atrnl1	-0.486594	0.0004	0.0121904
ENSMUSG000000031591.14	Asah1	-0.486927	0.00005	0.00258735
ENSMUSG000000019849.10	Prep	-0.487158	0.00005	0.00258735
ENSMUSG000000025016.10	Tm9sf3	-0.489441	0.00005	0.00258735
ENSMUSG000000057363.12	Uxs1	-0.490569	0.00005	0.00258735
ENSMUSG000000025903.14	Lypla1	-0.492047	0.00005	0.00258735
ENSMUSG000000025934.15	Gsta3	-0.493625	0.00035	0.011149
ENSMUSG000000031555.15	Adam9	-0.4945	0.00005	0.00258735
ENSMUSG000000022021.13	Diaph3	-0.497862	0.0017	0.0314636
ENSMUSG000000020458.16	Rtn4	-0.498963	0.00005	0.00258735
ENSMUSG000000037072.15	Sept15	-0.499071	0.00305	0.0460881
ENSMUSG000000051255.5	Gm6563	-0.501068	0.00035	0.011149
ENSMUSG000000024781.15	Lipa	-0.501864	0.00005	0.00258735
ENSMUSG000000025289.15	Prdx4	-0.502013	0.00005	0.00258735
ENSMUSG000000032320.7	Rcn2	-0.504445	0.00005	0.00258735
ENSMUSG000000021583.6	Erap1	-0.504523	0.00005	0.00258735
ENSMUSG000000038642.10	Ctss	-0.506924	0.0014	0.0281287
ENSMUSG000000025017.9	Pik3ap1	-0.508756	0.00005	0.00258735
ENSMUSG000000038503.15	Mesdc2	-0.512344	0.00135	0.0276053
ENSMUSG000000039007.9	Cpq	-0.514232	0.00005	0.00258735
ENSMUSG000000042082.6	Arsb	-0.514893	0.00005	0.00258735
ENSMUSG000000075470.1	Alg10b	-0.51616	0.00005	0.00258735

ENSMUSG00000039480.13	Nt5dc1	-0.517705	0.00005	0.00258735
ENSMUSG00000020650.14	Bcap29	-0.519899	0.00005	0.00258735
ENSMUSG000000105987.4	AI506816	-0.520442	0.00005	0.00258735
ENSMUSG000000048970.9	C1galt1c1	-0.525606	0.00005	0.00258735
ENSMUSG000000026617.16	Bpnt1	-0.526127	0.00005	0.00258735
ENSMUSG000000047434.13	Xyylt1	-0.527624	0.00005	0.00258735
ENSMUSG000000056220.14	Pla2g4a	-0.528848	0.00005	0.00258735
ENSMUSG000000031447.7	Lamp1	-0.529194	0.00005	0.00258735
ENSMUSG000000022122.14	Ednrb	-0.529383	0.00005	0.00258735
ENSMUSG000000019877.10	Serinc1	-0.53006	0.00005	0.00258735
ENSMUSG000000094724.7	Rnaset2b	-0.531151	0.00015	0.00627624
ENSMUSG000000003746.15	Man1a	-0.531392	0.00005	0.00258735
ENSMUSG000000054640.14	Slc8a1	-0.532602	0.0031	0.0466214
ENSMUSG000000100801.1	Gm15459	-0.534091	0.0001	0.00449574
ENSMUSG000000036503.13	Rnf13	-0.534171	0.00005	0.00258735
ENSMUSG000000047126.17	Cltc	-0.536389	0.003	0.0455497
ENSMUSG000000028563.16	Tm2d1	-0.537236	0.00005	0.00258735
ENSMUSG000000102869.1	2900097C17Rik	-0.538284	0.00005	0.00258735
ENSMUSG000000023078.6	Cxcl13	-0.543386	0.0007	0.0179285
ENSMUSG000000035133.8	Arhgap5	-0.547419	0.00005	0.00258735
ENSMUSG000000050931.7	Sgms2	-0.552774	0.00015	0.00627624
ENSMUSG000000026361.8	Cdc73	-0.553633	0.00005	0.00258735
ENSMUSG000000082536.1	Gm13456	-0.554294	0.0005	0.0142449
ENSMUSG000000004730.14	Adgre1	-0.555572	0.00005	0.00258735
ENSMUSG000000104913.1	Gm6560	-0.557574	0.00305	0.0460881
ENSMUSG000000024228.12	Nudt12	-0.558051	0.0006	0.0160143
ENSMUSG000000032314.14	Etfp	-0.559393	0.00005	0.00258735
ENSMUSG000000045799.5	Gm9800	-0.568633	0.00005	0.00258735
ENSMUSG000000019872.13	Smpd13a	-0.569659	0.00005	0.00258735
ENSMUSG000000022853.6	Ehhdh	-0.572486	0.00025	0.00905571
ENSMUSG000000027487.11	Cdk5rap1	-0.574024	0.0002	0.00775413
ENSMUSG000000035202.7	Lars2	-0.575402	0.00005	0.00258735
ENSMUSG000000044103.4	Il1f9	-0.57913	0.00155	0.0298193
ENSMUSG000000037852.8	Cpe	-0.579595	0.00005	0.00258735
ENSMUSG000000052428.10	Tmco1	-0.585152	0.00005	0.00258735
ENSMUSG000000020570.14	Sypl	-0.592039	0.00005	0.00258735
ENSMUSG000000023845.6	Lnpep	-0.593034	0.00005	0.00258735
ENSMUSG000000017831.7	Rab5a	-0.597619	0.00005	0.00258735
ENSMUSG000000033184.14	Tmed7	-0.606223	0.00005	0.00258735
ENSMUSG000000022092.10	Ppp3cc	-0.607301	0.00005	0.00258735
ENSMUSG000000098178.1	Gm42418	-0.61038	0.0002	0.00775413
ENSMUSG000000056234.14	Ncoa4	-0.626312	0.0005	0.0142449
ENSMUSG00000002944.15	Cd36	-0.629375	0.00005	0.00258735
ENSMUSG000000074419.11	Gm15448	-0.629836	0.0001	0.00449574
ENSMUSG000000027963.14	Extl2	-0.631997	0.00005	0.00258735
ENSMUSG000000024887.9	Asah2	-0.638378	0.00005	0.00258735
ENSMUSG000000028156.12	Eif4e	-0.686189	0.00205	0.0356026
ENSMUSG000000024298.14	Zfp871	-0.686204	0.0001	0.00449574
ENSMUSG000000060703.12	Cd302	-0.701273	0.00005	0.00258735
ENSMUSG000000048234.13	Rnf149	-0.708054	0.00005	0.00258735
ENSMUSG000000059195.10	Gm12715	-0.724215	0.00005	0.00258735
ENSMUSG000000024600.8	Slc27a6	-0.734748	0.00005	0.00258735
ENSMUSG000000048732.5	Kihl11	-0.744624	0.0008	0.0195422
ENSMUSG000000014905.3	Dnajb9	-0.744725	0.00005	0.00258735
ENSMUSG000000039530.17	Tusc3	-0.755475	0.00005	0.00258735
ENSMUSG000000027834.15	Serpini1	-0.779603	0.0017	0.0314636
ENSMUSG000000024084.7	Qpct	-0.792036	0.00005	0.00258735
ENSMUSG000000033792.12	Atp7a	-0.811561	0.0009	0.0212086
ENSMUSG000000067714.13	Lpar5	-0.84304	0.00055	0.0152247
ENSMUSG000000089942.9	Pira2	-0.849296	0.00005	0.00258735
ENSMUSG000000035142.18	Nubpl	-0.85251	0.00185	0.0333632
ENSMUSG000000079625.2	Tm4sf19	-0.862598	0.00005	0.00258735
ENSMUSG000000034488.14	Edil3	-0.878376	0.0001	0.00449574
ENSMUSG000000079685.9	Ulbp1	-0.895772	0.00005	0.00258735
ENSMUSG000000081723.1	Gm15931	-0.897487	0.00005	0.00258735
ENSMUSG000000081121.1	Gm12791	-0.938691	0.00235	0.0389965

ENSMUSG00000090675.1	Olf111	-0.943043	0.00025	0.00905571
ENSMUSG00000031138.4	F9	-0.951283	0.00225	0.038034
ENSMUSG00000053205.8	Styx	-0.959008	0.0004	0.0121904
ENSMUSG00000028262.13	Clca3a2	-0.969047	0.0006	0.0160143
ENSMUSG00000067161.6	Gm5560	-1.01026	0.0026	0.0414106
ENSMUSG00000074417.9	Gm14548	-1.02821	0.00005	0.00258735
ENSMUSG00000038594.8	Cep85l	-1.04266	0.00145	0.0286788
ENSMUSG00000090124.7	Ugt1a7c	-1.06383	0.0002	0.00775413
ENSMUSG00000025257.5	Ribc1	-1.08476	0.0003	0.0100619
ENSMUSG00000065037.1	Rn7sk	-1.08669	0.00005	0.00258735
ENSMUSG00000025019.15	Lcor	-1.15671	0.00005	0.00258735
ENSMUSG00000054178.1	Gm9938	-1.18102	0.00135	0.0276053
ENSMUSG000000109836.1	RP24-464B16.1	-1.23736	0.00005	0.00258735
ENSMUSG00000020728.17	Cep112	-1.28726	0.001	0.0226798
ENSMUSG000000108659.1	Gm34121	-1.33781	0.0023	0.0386217
ENSMUSG00000079884.6	Gm10698	-1.51509	0.00335	0.0488738
ENSMUSG00000030156.5	Cd69	-1.65839	0.00085	0.0203711

Table S6. Genes significantly regulated at and adjusted p-value (q-value)<0.05 in *Ldah* -KO PM treated with oxLDL.

Data were analyzed using the Wald test (two-tailed) followed by the Benjamini–Hochberg test to estimate the false discovery rate adjusted p-value (q_value).

gene_id	gene synonym	log2_fold change_KO/WT	p_value	q_value
ENSMUSG00000000753.15	Serpinf1	-1.49762	0.00005	0.0114713
ENSMUSG00000001119.7	Col6a1	-1.14729	0.00005	0.0114713
ENSMUSG00000001506.10	Col1a1	-1.37587	0.00005	0.0114713
ENSMUSG00000002020.15	Ltbp2	-1.39651	0.0001	0.0196651
ENSMUSG00000002900.15	Lamb1	-1.60141	0.0002	0.0321792
ENSMUSG00000005397.7	Nid1	-1.1491	0.00005	0.0114713
ENSMUSG00000012428.9	Steap4	-1.12344	0.00005	0.0114713
ENSMUSG00000014329.14	Bicc1	-1.29402	0.00005	0.0114713
ENSMUSG00000014599.10	Csf1	-1.09559	0.00035	0.0498408
ENSMUSG00000015854.7	Cd5l	0.645319	0.00005	0.0114713
ENSMUSG00000016252.7	Atp5e	0.571493	0.00015	0.0265479
ENSMUSG00000016458.13	Wt1	-0.935166	0.00015	0.0265479
ENSMUSG00000018593.12	Sparc	-0.997256	0.00005	0.0114713
ENSMUSG00000018822.7	Sfrp5	-0.723961	0.00005	0.0114713
ENSMUSG00000019852.6	Arfgef3	-0.79976	0.0002	0.0321792
ENSMUSG00000019929.15	Dcn	-0.67407	0.00005	0.0114713
ENSMUSG00000019997.11	Ctgf	-1.14922	0.00005	0.0114713
ENSMUSG00000020241.13	Col6a2	-0.938179	0.00005	0.0114713
ENSMUSG00000020427.11	Igfbp3	-1.76014	0.00005	0.0114713
ENSMUSG00000020473.13	Aebp1	-1.23365	0.00005	0.0114713
ENSMUSG00000021390.5	Ogn	-1.5494	0.00005	0.0114713
ENSMUSG00000021745.13	Ptprg	-3.20287	0.00005	0.0114713
ENSMUSG00000022098.9	Bmp1	-0.931806	0.00025	0.0397083
ENSMUSG00000022425.15	Enpp2	-1.28249	0.00005	0.0114713
ENSMUSG00000022665.14	Ccdc80	-1.00855	0.00005	0.0114713
ENSMUSG00000023078.6	Cxcl13	-1.64697	0.00005	0.0114713
ENSMUSG00000024087.3	Cyp1b1	-1.2394	0.00005	0.0114713
ENSMUSG00000024164.15	C3	-1.17284	0.00005	0.0114713
ENSMUSG00000024304.14	Cdh2	-1.09516	0.00005	0.0114713
ENSMUSG00000024529.13	Lox	-1.0114	0.0001	0.0196651
ENSMUSG00000026042.16	Col5a2	-1.12524	0.00005	0.0114713
ENSMUSG00000026072.12	Il1r1	-1.18295	0.00005	0.0114713
ENSMUSG00000026193.15	Fn1	-1.13939	0.00005	0.0114713
ENSMUSG00000026208.9	Des	-1.24421	0.00005	0.0114713
ENSMUSG00000026399.12	Cd55	-0.810928	0.00005	0.0114713
ENSMUSG00000027210.20	Meis2	-2.05303	0.00005	0.0114713
ENSMUSG00000027360.5	Hdc	-3.18431	0.00035	0.0498408
ENSMUSG00000027797.15	Dclk1	-1.89016	0.0001	0.0196651
ENSMUSG00000028195.4	Cyr61	-0.891543	0.0003	0.0447795
ENSMUSG00000029231.15	Pdgfra	-1.27891	0.00005	0.0114713
ENSMUSG00000029371.7	Cxcl5	-1.28466	0.00005	0.0114713
ENSMUSG00000029380.11	Cxcl1	-0.820937	0.00005	0.0114713
ENSMUSG00000029581.14	Fscn1	-0.974756	0.00005	0.0114713
ENSMUSG00000029661.16	Col1a2	-1.30902	0.00005	0.0114713
ENSMUSG00000030022.14	Adamts9	-1.41696	0.00005	0.0114713
ENSMUSG00000030117.5	Gdf3	1.78044	0.00005	0.0114713
ENSMUSG00000031375.17	Bgn	-0.85879	0.00015	0.0265479
ENSMUSG00000031380.10	Figf	-1.48628	0.0002	0.0321792
ENSMUSG00000031517.8	Gpm6a	-0.853333	0.00035	0.0498408
ENSMUSG00000031673.6	Cdh11	-1.06729	0.00005	0.0114713
ENSMUSG00000031877.8	Ces2g	-1.18611	0.0002	0.0321792
ENSMUSG00000032216.14	Nedd4	-0.875488	0.00005	0.0114713
ENSMUSG00000032372.14	Plscr2	-1.19169	0.0001	0.0196651
ENSMUSG00000034205.16	Loxl2	-1.32813	0.00005	0.0114713
ENSMUSG00000034573.14	Ptpn13	-1.1545	0.00005	0.0114713
ENSMUSG00000035202.7	Lars2	-0.826839	0.00015	0.0265479
ENSMUSG00000035373.2	Ccl7	-0.837967	0.00015	0.0265479
ENSMUSG00000035595.6	1600002K03Rik	0.613669	0.0003	0.0447795
ENSMUSG00000035783.8	Acta2	-0.804877	0.00005	0.0114713
ENSMUSG00000036902.10	Neto2	-0.838181	0.0001	0.0196651
ENSMUSG00000037669.14	Ldah	-0.581416	0.0001	0.0196651

ENSMUSG00000038418.7	Egr1	-0.880716	0.0002	0.0321792
ENSMUSG00000039001.12	Rps21	0.565696	0.0003	0.0447795
ENSMUSG00000039221.10	Rpl22l1	0.656477	0.00005	0.0114713
ENSMUSG00000039252.11	Lgi2	-1.28286	0.0001	0.0196651
ENSMUSG00000039831.16	Arhgap29	-1.00632	0.00005	0.0114713
ENSMUSG00000040152.8	Thbs1	-0.587178	0.0002	0.0321792
ENSMUSG00000042985.7	Upk3b	-1.27702	0.00005	0.0114713
ENSMUSG00000043110.2	Lrrn4	-0.992193	0.0002	0.0321792
ENSMUSG00000045954.7	Sdpr	-1.13972	0.00005	0.0114713
ENSMUSG00000047907.11	Tshz2	-1.49576	0.00005	0.0114713
ENSMUSG00000048376.5	F2r	-1.11748	0.00005	0.0114713
ENSMUSG00000049521.1	Cdc42ep1	-1.54031	0.0003	0.0447795
ENSMUSG00000050953.9	Gja1	-1.04909	0.00015	0.0265479
ENSMUSG00000052911.9	Lamb2	-2.46259	0.0003	0.0447795
ENSMUSG00000052957.7	Gas1	-0.896758	0.00005	0.0114713
ENSMUSG00000054793.8	Cadm4	-0.863708	0.00015	0.0265479
ENSMUSG00000061048.7	Cdh3	-1.48003	0.00005	0.0114713
ENSMUSG00000061353.11	Cxcl12	-0.945077	0.00005	0.0114713
ENSMUSG00000065037.1	Rn7sk	-1.26051	0.0001	0.0196651
ENSMUSG00000068240.5	Gm11808	0.654087	0.00005	0.0114713
ENSMUSG00000070436.12	Serpinh1	-0.83167	0.00005	0.0114713
ENSMUSG00000071984.10	Fndc1	-2.45468	0.0001	0.0196651
ENSMUSG00000075254.11	Heg1	-0.92478	0.00005	0.0114713
ENSMUSG00000097971.3	Gm26917	-0.998563	0.00005	0.0114713
ENSMUSG00000100658.1	F730311O21Rik	-0.761817	0.00035	0.0498408
ENSMUSG00000110386.1	RP23-359B23.11	0.953329	0.00005	0.0114713

Table S7. Genes with expression proportional to LDAH levels.

Approved symbol	Approved name
Serpinf1	serpin family F member 1
Col1A1	collagen type I alpha 1 chain
Fscn1	fascin actin-bundling protein 1
Vegfd	vascular endothelial growth factor D
Ldah	lipid droplet associated hydrolase
Col6A1	collagen type VI alpha 1 chain
Ltbp2	latent transforming growth factor beta binding protein 2
Ltbp3	latent transforming growth factor beta binding protein 3
Lamb1	laminin subunit beta 1
Bicc1	BicC family RNA binding protein 1
Csf1	colony stimulating factor 1
Sparc	secreted protein acidic and cysteine rich
Ccn2	cellular communication network factor 2
Col6A2	collagen type VI alpha 2 chain
Igfbp3	insulin like growth factor binding protein 3
Aebp1	AE binding protein 1
Ogn	osteoglycin
Bmp1	bone morphogenetic protein 1
Cdh2	cadherin 2
Col5A2	collagen type V alpha 2 chain
Il1R1	interleukin 1 receptor type 1
Des	desmin
Cd55	CD55 molecule (Cromer blood group)
Meis2	Meis homeobox 2
Hdc	histidine decarboxylase
Heca	hdc homolog, cell cycle regulator
Dclk1	doublecortin like kinase 1
Ccn1	cellular communication network factor 1
Pdgfra	platelet derived growth factor receptor alpha
Cxcl1	C-X-C motif chemokine ligand 1
Col1A2	collagen type I alpha 2 chain
Bgn	biglycan
Plscr2	phospholipid scramblase 2
Loxl2	lysyl oxidase like 2
Ptpn13	protein tyrosine phosphatase non-receptor type 13
Ccl7	C-C motif chemokine ligand 7
Acta2	actin alpha 2, smooth muscle
Lgi2	leucine rich repeat LGI family member 2
Arhgap29	Rho GTPase activating protein 29
Upk3B	uroplakin 3B

F2R	coagulation factor II thrombin receptor
Cdc42Ep1	CDC42 effector protein 1
Gas1	growth arrest specific 1
Cadm4	cell adhesion molecule 4
Cdh3	cadherin 3
Cdh15	cadherin 15
Cxcl12	C-X-C motif chemokine ligand 12
Serpinh1	serpin family H member 1
Fndc1	fibronectin type III domain containing 1
Mx1	MX dynamin like GTPase 1
Tom1L2	target of myb1 like 2 membrane trafficking protein
Mapk7	mitogen-activated protein kinase 7
Ocrl	OCRL inositol polyphosphate-5-phosphatase
Gramd1A	GRAM domain containing 1A
Slc1A5	solute carrier family 1 member 5
Kmt2A	lysine methyltransferase 2A
Dyrk1B	dual specificity tyrosine phosphorylation regulated kinase 1B
Dennd1C	DENN domain containing 1C
Nfat5	nuclear factor of activated T cells 5
Kifc2	kinesin family member C2
Pan2	poly(A) specific ribonuclease subunit PAN2
Nlrp4	NLR family pyrin domain containing 4
Rdh14	retinol dehydrogenase 14
Hnrnp1	heterogeneous nuclear ribonucleoprotein H1
Fnbp4	formin binding protein 4
Dqx1	DEAQ-box RNA dependent ATPase 1
Ubp1	upstream binding protein 1
Rbm25	RNA binding motif protein 25
Cfap161	cilia and flagella associated protein 161
Ptprs	protein tyrosine phosphatase receptor type S
Slc9A5	solute carrier family 9 member A5
Gdi1	GDP dissociation inhibitor 1
Dennd6B	DENN domain containing 6B
Kdm6B	lysine demethylase 6B
Tada2A	transcriptional adaptor 2A
Syne4	spectrin repeat containing nuclear envelope family member 4
Rmnd1	required for meiotic nuclear division 1 homolog
Arg1	arginase 1
Tinagl1	tubulointerstitial nephritis antigen like 1
Clk4	CDC like kinase 4
Limk2	LIM domain kinase 2
Polm	DNA polymerase mu

Unk	unk zinc finger
Rhbdf2	rhomboid 5 homolog 2
Ntn1	netrin 1
Pnn	pinin, desmosome associated protein
Meg3	maternally expressed 3
Fam193B	family with sequence similarity 193 member B
Mtx3	metaxin 3
Mss51	MSS51 mitochondrial translational activator
Zswim8	zinc finger SWIM-type containing 8
Camk2G	calcium/calmodulin dependent protein kinase II gamma
Nisch	nischarin
Fam160B2	family with sequence similarity 160 member B2
Acin1	apoptotic chromatin condensation inducer 1
Zscan26	zinc finger and SCAN domain containing 26
Trio	trio Rho guanine nucleotide exchange factor
Pde1B	phosphodiesterase 1B
Paxbp1	PAX3 and PAX7 binding protein 1
Prpf40B	pre-mRNA processing factor 40 homolog B
Celsr3	cadherin EGF LAG seven-pass G-type receptor 3
Slc25A27	solute carrier family 25 member 27
Trem11	triggering receptor expressed on myeloid cells like 1
Akap8	A-kinase anchoring protein 8
Luc7L	LUC7 like
Adamts10	ADAM metallopeptidase with thrombospondin type 1 motif 10
Trim26	tripartite motif containing 26
Pcyt2	phosphate cytidyltransferase 2, ethanolamine
Tepsin	TEPSIN adaptor related protein complex 4 accessory protein
Pidd1	p53-induced death domain protein 1
Ccnt2	cyclin T2
Elk4	ETS transcription factor ELK4
Sapcd2	suppressor APC domain containing 2
Arrdc1	arrestin domain containing 1
Mdk	midkine
Dll4	delta like canonical Notch ligand 4
Adam33	ADAM metallopeptidase domain 33
Rbck1	RANBP2-type and C3HC4-type zinc finger containing 1
Stx16	syntaxin 16
Helz2	helicase with zinc finger 2
Alpk1	alpha kinase 1
Riiad1	regulatory subunit of type II PKA R-subunit (RIIa) domain containing 1
Tpm2	tropomyosin 2
Tekt2	tektin 2

Miip	migration and invasion inhibitory protein
Luc7L2	LUC7 like 2, pre-mRNA splicing factor
Fbxl19	F-box and leucine rich repeat protein 19
Wdr13	WD repeat domain 13
Phka2	phosphorylase kinase regulatory subunit alpha 2
Rfx1	regulatory factor X1
Mast3	microtubule associated serine/threonine kinase 3
Lpar2	lysophosphatidic acid receptor 2
Terf2	telomeric repeat binding factor 2
Trim29	tripartite motif containing 29
Pde4A	phosphodiesterase 4A
Dock6	dedicator of cytokinesis 6
Sltm	SAFB like transcription modulator
Hmg20A	high mobility group 20A
Bsn	bassoon presynaptic cytomatrix protein
Amt	aminomethyltransferase
Srek1	splicing regulatory glutamic acid and lysine rich protein 1
Oas2	2'-5'-oligoadenylate synthetase 2
Stard9	StAR related lipid transfer domain containing 9
Mtss2	MTSS I-BAR domain containing 2
Ppp1R16A	protein phosphatase 1 regulatory subunit 16A
Cpsf1	cleavage and polyadenylation specific factor 1
Cipc	CLOCK interacting pacemaker
Ogt	O-linked N-acetylglucosamine (GlcNAc) transferase
Slc25A37	solute carrier family 25 member 37
Znf2	zinc finger protein 2
Cpsf7	cleavage and polyadenylation specific factor 7
Dhx57	DEXH-box helicase 57
Mid1	midline 1
Leng8	leukocyte receptor cluster member 8
Prpf39	pre-mRNA processing factor 39
Zcchc7	zinc finger CCHC-type containing 7
Arhgap45	Rho GTPase activating protein 45
Usp35	ubiquitin specific peptidase 35
Bbs10	Bardet-Biedl syndrome 10
Wnt4	Wnt family member 4
Ehmt1	euchromatic histone lysine methyltransferase 1
Stag3	stromal antigen 3
Znf692	zinc finger protein 692
Uvssa	UV stimulated scaffold protein A
Cep85	centrosomal protein 85
Thoc2	THO complex 2

Ankrd13B	ankyrin repeat domain 13B
Zc3H7A	zinc finger CCCH-type containing 7A
Wnk2	WNK lysine deficient protein kinase 2
Mlxip	MLX interacting protein
Sgsm2	small G protein signaling modulator 2
Scaf1	SR-related CTD associated factor 1
Ubn2	ubiquitin 2
Ralgps1	Ral GEF with PH domain and SH3 binding motif 1
Zmym5	zinc finger MYM-type containing 5
Camta2	calmodulin binding transcription activator 2
Tet2	tet methylcytosine dioxygenase 2
Zmiz2	zinc finger MIZ-type containing 2
Yeats2	YEATS domain containing 2
Chd7	chromodomain helicase DNA binding protein 7
Dmxl2	Dmx like 2
Kif21B	kinesin family member 21B
Grk3	G protein-coupled receptor kinase 3
Ikbke	inhibitor of nuclear factor kappa B kinase subunit epsilon
Dennd4B	DENN domain containing 4B
Ago4	argonaute RISC component 4
Asxl1	ASXL transcriptional regulator 1
Safb2	scaffold attachment factor B2
Als2Cl	ALS2 C-terminal like
Slc38A6	solute carrier family 38 member 6
Shb	SH2 domain containing adaptor protein B
Tmem86B	transmembrane protein 86B
Trim39	tripartite motif containing 39
Npas4	neuronal PAS domain protein 4
Rbp1	retinol binding protein 1
Arid4A	AT-rich interaction domain 4A
Ankrd16	ankyrin repeat domain 16
Tmem81	transmembrane protein 81
Sacs	sacsin molecular chaperone
Phldb1	pleckstrin homology like domain family B member 1
Slc25A47	solute carrier family 25 member 47
Morn4	MORN repeat containing 4
Ptges	prostaglandin E synthase
Nlgn2	neuroligin 2
Tchh	trichohyalin
Nav2	neuron navigator 2
Tnrc6A	trinucleotide repeat containing adaptor 6A
Usp21	ubiquitin specific peptidase 21

Usp25	ubiquitin specific peptidase 25
Chd8	chromodomain helicase DNA binding protein 8
Lgals4	galectin 4
Ercc6	ERCC excision repair 6, chromatin remodeling factor
Gon4L	gon-4 like
Znf182	zinc finger protein 182
Ddx17	DEAD-box helicase 17
Srsf11	serine and arginine rich splicing factor 11
Per2	period circadian regulator 2
Rnf169	ring finger protein 169
Kmt5C	lysine methyltransferase 5C
Zbtb40	zinc finger and BTB domain containing 40
Clasrp	CLK4 associating serine/arginine rich protein
Dot1L	DOT1 like histone lysine methyltransferase
Rbak	RB associated KRAB zinc finger
Snrnp70	small nuclear ribonucleoprotein U1 subunit 70
Brpf3	bromodomain and PHD finger containing 3
Trerf1	transcriptional regulating factor 1
Fbxl18	F-box and leucine rich repeat protein 18
Cep152	centrosomal protein 152
Clk2	CDC like kinase 2
Clk2	CDC like kinase 2
Fgfr1Op	FGFR1 oncogene partner
Bicra	BRD4 interacting chromatin remodeling complex associated protein
Ahnak2	AHNAK nucleoprotein 2
C4B	complement C4B (Chido blood group)
C4A	complement C4A (Rodgers blood group)
D2Hgdh	D-2-hydroxyglutarate dehydrogenase
Sptbn5	spectrin beta, non-erythrocytic 5
Zc3H3	zinc finger CCCH-type containing 3
Plekhn1	pleckstrin homology domain containing N1
Spaca6	sperm acrosome associated 6
Snhg15	small nucleolar RNA host gene 15
Snhg20	small nucleolar RNA host gene 20
Mir17Hg	miR-17-92a-1 cluster host gene
Neat1	nuclear paraspeckle assembly transcript 1
Malat1	metastasis associated lung adenocarcinoma transcript 1
Meg8	maternally expressed 8, small nucleolar RNA host gene
Ms4A14	membrane spanning 4-domains A14
Kcnq1Ot1	KCNQ1 opposite strand/antisense transcript 1

Table S8. Overlapping genes between Ldah and previously identified LXR targets in macrophages.

gene_id	symbol	Goo et al	Feldman et al.	Feldman et al.	Feldman et al.	Feldman et al.	Ramon-Vazquez et al.
		Fold vs. THP-1 + DMSO			Fold vs. THP-1 foam cells		BMM
		Foam cells Log2 FC (Tg/WT)	THP-1 + T0901317 Fold Change	THP-1 foam cells + T0901317 Fold Change	THP-1 foam cells Fold Change	THP-1 foam cell + T0901317 Fold Change	GW 3965 LXR target
ENSMUSG00000031098.18	Syt8	1.23291	-	-	-	-	Yes
ENSMUSG00000066975.12	Cryba4	0.848567	-	-	-	-	Yes
ENSMUSG00000002100.15	Mybpc3	0.801451	-	-	3.55	-	-
ENSMUSG00000045282.7	Tmem86b	0.680165	-	2.08	-	-	-
ENSMUSG00000027239.14	Mdk	0.680099	-	-	-	-	Yes
ENSMUSG00000040663.8	Clcf1	0.579513	-	-	4.32	-	-
ENSMUSG00000073609.9	D2hgdh	0.57739	-	2.15	2.28	-	-
ENSMUSG00000008200.14	Fnbp4	0.559785	-	2.47	1.67	-	-
ENSMUSG00000032198.8	Dock6	0.552541	-	6.55	3.47*	-	-
ENSMUSG00000050737.13	Ptges	0.488789	-	7.91	10.45	-	-
ENSMUSG00000021910.15	Nisch	0.476426	0.76	-	-	-	-
ENSMUSG00000031389.17	Arhgap4	0.471822	0.77	0.57	-	-	-
ENSMUSG00000044813.15	Shb	0.467815	-	3.04	1.87	-	Yes
ENSMUSG00000055866.9	Per2	0.464561	-	-	-	-	Yes
ENSMUSG00000009741.14	Ubp1	0.433344	1.28	-	-	-	-
ENSMUSG00000006395.16	Hyi	0.429045	-	2.23	1.97	-	-
ENSMUSG00000023952.13	Gtpbbp2	0.41292	-	3.84	-	-	-
ENSMUSG00000041235.11	Chd7	0.404886	1.32	-	-	-	-
ENSMUSG00000031295.13	Phka2	0.393297	-	-	3.36	-	-
ENSMUSG00000001173.15	Ocrl	0.391173	-	-	2.14	-	-
ENSMUSG00000033819.15	Ppp1r16a	0.390599	-	-	4.45*	-	-
ENSMUSG00000042349.13	lkbke	0.378942	-	-	0.51	-	Yes
ENSMUSG00000024193.7	Phf1	0.359026	-	5.15	2.32	2.48	-
ENSMUSG00000038351.14	Sgsm2	0.329184	-	-	1.95	-	-
ENSMUSG00000025158.7	Rfng	0.324318	-	-	1.9	-	-
ENSMUSG00000037221.13	Mospd3	0.31899	-	-	0.42	-	-
ENSMUSG00000026544.6	Dusp23	0.29605	-	0.59	-	0.56	-
ENSMUSG0000001918.17	Slc1a5	0.292262	-	5.03	5.39*	-	-
ENSMUSG00000029817.11	Tra2a	0.291	-	-	0.36	-	-
ENSMUSG00000025144.17	Stra13	0.288484	-	0.51*	0.57*	-	-
ENSMUSG00000024856.10	Cdk2ap2	0.287504	-	0.46*	0.42	-	-
ENSMUSG00000041781.8	Cpsf2	-0.260727	-	-	1.68	-	-
ENSMUSG00000041958.10	Pigs	-0.262644	-	-	0.5	-	-
ENSMUSG00000027775.9	Mfsd1	-0.26537	-	0.29	0.33	-	-
ENSMUSG00000050912.15	Tmem123	-0.269675	1.32*	-	-	-	-
ENSMUSG00000022912.8	Pros1	-0.270499	-	-	0.57*	-	-
ENSMUSG00000046841.4	Ckap4	-0.273775	1.26	2.54*	1.97	-	-
ENSMUSG00000031165.6	Was	-0.274809	-	0.55*	0.46*	-	-
ENSMUSG00000021108.17	Prkch	-0.275429	-	4.98*	3.63*	-	-
ENSMUSG00000031337.16	Mtm1	-0.277104	-	-	-	-	Yes
ENSMUSG00000020075.7	Ddx21	-0.279205	1.47*	-	-	-	-

ENSMUSG00000011179.7	Odc1	-0.289525	-	0.46	0.55	-	-
ENSMUSG00000032763.10	llyesbl	-0.290879	-	-	-	-	Yes
ENSMUSG00000030220.13	Arhgdb	-0.290993	-	0.24	0.3	-	-
ENSMUSG00000032349.13	EloYesl5	-0.29941	1.97*	-	-	-	Yes
ENSMUSG00000026223.15	lrm2c	-0.301775	0.8	-	0.53	-	-
ENSMUSG00000068798.10	Rap1a	-0.30521	-	-	-	-	Yes
ENSMUSG00000049516.9	Spty2d1	-0.310043	-	0.38	0.39	-	-
ENSMUSG00000029998.14	Pcyox1	-0.311046	-	-	-	-	Yes
ENSMUSG00000032050.16	Rdx	-0.311564	-	2.34	-	-	-
ENSMUSG00000020841.5	Cpd	-0.313264	-	2.18*	2.21	-	-
ENSMUSG00000022664.11	Slc35a5	-0.324119	-	0.53	-	-	-
ENSMUSG00000029338.13	Antxr2	-0.324286	-	0.2	0.29	-	-
ENSMUSG00000020130.8	Tbc1d15	-0.324594	-	2.32*	-	-	-
ENSMUSG00000079037.9	Prnp	-0.329665	1.33	3.29*	2.00*	-	-
ENSMUSG00000025203.5	Scd2	-0.332794	-	-	-	-	Yes
ENSMUSG00000027195.10	Hsd17b12	-0.337639	-	-	1.84	-	-
ENSMUSG00000035847.15	lds	-0.341298	-	0.51*	0.47*	-	-
ENSMUSG00000029672.16	Fam3c	-0.352147	-	-	-	-	Yes
ENSMUSG0000003721.14	Insig2	-0.35411	-	-	0.52*	-	-
ENSMUSG00000031007.2	Atp6ap2	-0.3555	-	0.52	0.46	-	-
ENSMUSG00000032475.15	Nck1	-0.355867	-	0.42*	0.46*	-	-
ENSMUSG00000029426.8	Scarb2	-0.364799	-	-	-	-	Yes
ENSMUSG00000033863.1	Klf9	-0.368354	-	2.11*	2.21*	-	-
ENSMUSG00000020048.13	Hsp90b1	-0.371044	-	0.50*	0.4	-	-
ENSMUSG00000062070.12	Pgk1	-0.373352	-	0.41	0.53	-	-
ENSMUSG00000037071.2	Scd1	-0.37379	-	-	-	-	Yes
ENSMUSG00000022257.3	Laptm4b	-0.374818	-	-	0.47*	-	-
ENSMUSG00000015854.7	Cd5l	-0.375955	-	-	-	-	Yes
ENSMUSG00000029767.16	Calu	-0.380567	-	2.00*	-	-	-
ENSMUSG00000072235.5	Tuba1a	-0.38428	-	0.3	0.38	-	-
ENSMUSG00000030786.18	ltgam	-0.384339	-	0.38	0.38	-	-
ENSMUSG00000030208.15	Emp1	-0.386647	-	-	1.93	-	-
ENSMUSG00000017057.9	lly13ra1	-0.39076	-	-	0.45	-	-
ENSMUSG00000030096.8	Slc6a6	-0.394469	-	4.25*	3.93	-	-
ENSMUSG00000028111.4	Ctsk	-0.397706	-	3.73	-	-	-
ENSMUSG00000071855.4	Ccdc112	-0.400304	-	0.35	-	-	-
ENSMUSG00000078945.10	Naip2	-0.401369	-	-	-	-	Yes
ENSMUSG00000021190.14	Lgmn	-0.404262	0.72*	0.19*	-	-	-
ENSMUSG00000045092.8	S1pr1	-0.436563	-	-	-	-	Yes
ENSMUSG00000020571.12	Pdia6	-0.441169	-	0.37	0.4	-	-
ENSMUSG00000026986.14	Hnmt	-0.45104	-	0.74	-	-	-
ENSMUSG00000026864.13	Hspa5	-0.45858	-	-	0.56*	-	-
ENSMUSG00000028270.12	Gbp2	-0.460988	-	-	0.17	5.85*	-
ENSMUSG00000042684.8	Npl	-0.469555	0.72	0.54	-	-	-
ENSMUSG00000022351.14	Sqle	-0.471421	1.59	0.38	0.25	-	-
ENSMUSG00000053253.16	Ndfip2	-0.471635	-	0.58*	0.52	-	-
ENSMUSG00000020368.15	Canx	-0.481378	-	-	0.47	-	-
ENSMUSG00000025016.10	Tm9sf3	-0.489441	-	-	0.51	-	-

ENSMUSG00000028563.16	Tm2d1	-0.537236	-	-	1.85*	-	-
ENSMUSG00000019872.13	Smpdl3a	-0.569659	4.03	-	-	-	-
ENSMUSG00000023845.6	Lnpep	-0.593034	-	-	-	-	Yes
ENSMUSG00000002944.15	Cd36	-0.629375	1.27	-	1.84	-	-
ENSMUSG000000060703.12	Cd302	-0.701273	-	-	-	-	Yes
ENSMUSG00000014905.3	Dnajb9	-0.744725	-	2.63	-	2.02	-
ENSMUSG000000067714.13	Lpar5	-0.84304	-	-	0.14	-	-
ENSMUSG00000079625.2	Tm4sf19	-0.862598	1.37	-	-	-	-
ENSMUSG00000079685.9	Ulbp1	-0.895772	-	3.35*	3.53	-	-

* : LXR knockdown sensitive

Table S9. Two-tailed Pearson's correlation of LDAH with other genes in arterial leukocytes.

Feature ID	P-value (Ldah)	FDR step up (Ldah)	Partial correlation (Ldah)
Syng1	1.34E-17	8.83E-14	1.26E-01
Tmem256	1.65E-17	8.83E-14	1.25E-01
Mfge8	1.12E-16	4.47E-13	1.22E-01
Mlf2	1.45E-16	4.64E-13	1.22E-01
2010111I01Rik	2.22E-16	5.93E-13	1.21E-01
Atp6v0d2	3.06E-16	7.01E-13	1.20E-01
Clu	4.02E-16	7.62E-13	1.20E-01
Degs1	4.28E-16	7.62E-13	1.20E-01
Lum	7.61E-16	1.22E-12	1.19E-01
Acta2	1.17E-15	1.70E-12	1.18E-01
Nr1h3	1.50E-15	1.92E-12	1.17E-01
Gpnmb	1.64E-15	1.92E-12	1.17E-01
Uap111	1.67E-15	1.92E-12	1.17E-01
Rcan2	2.53E-15	2.70E-12	1.16E-01
Lrrc58	2.71E-15	2.71E-12	1.16E-01
Amfr	5.47E-15	5.16E-12	1.15E-01
Cmas	6.42E-15	5.71E-12	1.15E-01
Polr2l	6.83E-15	5.76E-12	1.15E-01
Ptp1b	7.87E-15	6.30E-12	1.14E-01
Morf4l2	1.01E-14	7.22E-12	1.14E-01
Spcs1	1.04E-14	7.22E-12	1.14E-01
Igf2r	1.25E-14	8.35E-12	1.13E-01
Vat1	1.41E-14	9.06E-12	1.13E-01
Igfbp7	1.50E-14	9.21E-12	1.13E-01
Gyg	1.89E-14	1.12E-11	1.13E-01
Ahnak2	2.59E-14	1.40E-11	1.12E-01
Acads	2.62E-14	1.40E-11	1.12E-01
Mgp	3.61E-14	1.85E-11	1.11E-01
Oxct1	3.69E-14	1.85E-11	1.11E-01
Mmp12	4.10E-14	1.99E-11	1.11E-01
Nagk	4.51E-14	2.13E-11	1.11E-01
Fam198b	4.71E-14	2.15E-11	1.11E-01
Mrpl18	5.05E-14	2.24E-11	1.11E-01
Il7r	6.06E-14	2.62E-11	1.10E-01
Cd5l	6.43E-14	2.64E-11	1.10E-01
Mrpl27	9.58E-14	3.83E-11	1.10E-01
Hebp1	1.10E-13	4.19E-11	1.09E-01
Fabp5	1.14E-13	4.21E-11	1.09E-01
Nkiras2	1.16E-13	4.21E-11	1.09E-01
Myl9	1.35E-13	4.79E-11	1.09E-01
Tagln	1.66E-13	5.78E-11	1.09E-01
Tm4sf1	2.13E-13	7.16E-11	1.08E-01

Myh11	2.15E-13	7.16E-11	1.08E-01
Anxa4	2.31E-13	7.56E-11	1.08E-01
Bgn	2.76E-13	8.84E-11	1.08E-01
Olfml3	2.86E-13	8.98E-11	1.07E-01
Col1a2	3.61E-13	1.11E-10	1.07E-01
Fam129b	3.83E-13	1.16E-10	1.07E-01
Rnf7	3.92E-13	1.16E-10	1.07E-01
Higd1a	4.30E-13	1.25E-10	1.07E-01
Pam	4.97E-13	1.41E-10	1.06E-01
Cops7a	5.01E-13	1.41E-10	1.06E-01
N6amt2	5.29E-13	1.46E-10	1.06E-01
Sparc	6.23E-13	1.69E-10	1.06E-01
Ctsd	6.45E-13	1.72E-10	1.06E-01
Fblim1	6.54E-13	1.72E-10	1.06E-01
Lpl	8.28E-13	2.13E-10	1.05E-01
Mrps23	8.39E-13	2.13E-10	1.05E-01
Gng12	8.82E-13	2.21E-10	1.05E-01
Rab1a	9.70E-13	2.39E-10	1.05E-01
Dusp3	1.00E-12	2.43E-10	1.05E-01
Csrp2	1.02E-12	2.43E-10	1.05E-01
Trem2	1.06E-12	2.49E-10	1.05E-01
Col3a1	1.14E-12	2.65E-10	1.05E-01
Tmed3	1.24E-12	2.84E-10	1.05E-01
Cyb5r3	1.37E-12	3.09E-10	1.04E-01
Chmp3	1.45E-12	3.23E-10	1.04E-01
Tpm2	1.56E-12	3.42E-10	1.04E-01
PsmD6	1.65E-12	3.58E-10	1.04E-01
Tpm1	1.71E-12	3.64E-10	1.04E-01
Tmem147	1.85E-12	3.89E-10	1.04E-01
Wbp5	1.93E-12	4.01E-10	1.04E-01
Dnajc19	2.17E-12	4.45E-10	1.03E-01
Man1a2	2.25E-12	4.57E-10	1.03E-01
Pld3	2.29E-12	4.58E-10	1.03E-01
Cltb	2.34E-12	4.58E-10	1.03E-01
Speg	2.37E-12	4.58E-10	1.03E-01
Arl2	2.39E-12	4.58E-10	1.03E-01
Atp5f1	2.40E-12	4.58E-10	1.03E-01
Slc38a7	2.43E-12	4.58E-10	1.03E-01
Napa	2.87E-12	5.29E-10	1.03E-01
Eln	2.88E-12	5.29E-10	1.03E-01
Elovl1	2.97E-12	5.41E-10	1.03E-01
Cnn1	3.14E-12	5.64E-10	1.03E-01
Sucla2	3.23E-12	5.75E-10	1.03E-01
Gtf3a	3.42E-12	6.02E-10	1.02E-01

Nrp2	3.66E-12	6.28E-10	1.02E-01
Pcp4l1	3.67E-12	6.28E-10	1.02E-01
Capg	3.72E-12	6.28E-10	1.02E-01
Itgav	3.88E-12	6.47E-10	1.02E-01
Gsk3b	4.05E-12	6.69E-10	1.02E-01
Dcn	4.15E-12	6.75E-10	1.02E-01
Tnfsf12	4.18E-12	6.75E-10	1.02E-01
Exosc4	4.22E-12	6.75E-10	1.02E-01
Mfsd11	4.49E-12	7.12E-10	1.02E-01
Uggt1	4.57E-12	7.15E-10	1.02E-01
Arl11	4.60E-12	7.15E-10	1.02E-01
Bcar3	5.45E-12	8.37E-10	1.02E-01
Arl8b	5.49E-12	8.37E-10	1.01E-01
Myd8f	5.54E-12	8.37E-10	1.01E-01
Serpina3n	5.84E-12	8.73E-10	1.01E-01
Mcf2d	6.52E-12	9.67E-10	1.01E-01
Tspan4	6.92E-12	9.99E-10	1.01E-01
Mrpl51	7.27E-12	1.04E-09	1.01E-01
Cisd1	7.31E-12	1.04E-09	1.01E-01
Cyc1	7.43E-12	1.04E-09	1.01E-01
Mgat5	8.08E-12	1.12E-09	1.01E-01
Gm10020	8.21E-12	1.13E-09	1.01E-01
Ngfrap1	8.32E-12	1.14E-09	1.01E-01
Gadd45a	8.46E-12	1.15E-09	1.01E-01
Spp1	8.75E-12	1.18E-09	1.01E-01
Pgp	9.69E-12	1.29E-09	1.00E-01
Ufm1	1.03E-11	1.36E-09	1.00E-01
Slc27a1	1.04E-11	1.36E-09	1.00E-01
Trappc6b	1.10E-11	1.44E-09	1.00E-01
Rxra	1.19E-11	1.53E-09	9.99E-02
Apoe	1.21E-11	1.55E-09	-9.98E-02
Plekhb2	1.22E-11	1.55E-09	9.98E-02
Tmem65	1.36E-11	1.69E-09	9.96E-02
Arpc5l	1.38E-11	1.69E-09	9.96E-02
Col1a1	1.38E-11	1.69E-09	9.96E-02
Gm4799	1.47E-11	1.78E-09	9.94E-02
Mff	1.52E-11	1.80E-09	9.94E-02
Glg1	1.52E-11	1.80E-09	9.93E-02
Gclm	1.53E-11	1.80E-09	9.93E-02
Ldlrap1	1.53E-11	1.80E-09	9.93E-02
Scd2	1.54E-11	1.80E-09	9.93E-02
Hacd1	1.55E-11	1.80E-09	9.93E-02
Dtnbp1	1.60E-11	1.84E-09	9.92E-02
Gdpd1	1.83E-11	2.09E-09	9.90E-02

Vti1b	2.02E-11	2.28E-09	9.87E-02
Dap	2.03E-11	2.28E-09	9.87E-02
Ctsb	2.06E-11	2.28E-09	9.87E-02
Timm13	2.08E-11	2.28E-09	9.87E-02
Nucb1	2.09E-11	2.28E-09	9.87E-02
Ankrd40	2.10E-11	2.28E-09	9.87E-02
Itfg1	2.86E-11	3.07E-09	9.80E-02
Atp6v1a	3.08E-11	3.29E-09	9.78E-02
Ak6	3.19E-11	3.38E-09	9.78E-02
Gpr137b	3.35E-11	3.53E-09	9.77E-02
Ctsk	3.89E-11	4.05E-09	9.73E-02
Emc4	3.94E-11	4.07E-09	9.73E-02
Tmem205	3.99E-11	4.10E-09	9.73E-02
Gstm1	4.22E-11	4.30E-09	9.72E-02
Creg1	4.39E-11	4.45E-09	9.71E-02
Fzd2	4.46E-11	4.49E-09	9.70E-02
Socs6	4.82E-11	4.82E-09	9.69E-02
Mrpl36	4.95E-11	4.92E-09	9.68E-02
Actn1	5.02E-11	4.96E-09	9.68E-02
Sost	5.07E-11	4.98E-09	9.68E-02
Minos1	5.41E-11	5.25E-09	9.66E-02
Naa20	5.48E-11	5.29E-09	9.66E-02
Blnk	5.74E-11	5.48E-09	9.65E-02
Mrpl40	5.75E-11	5.48E-09	9.65E-02
Gng11	5.78E-11	5.48E-09	9.65E-02
Ykt6	6.28E-11	5.92E-09	9.63E-02
Rnf128	6.36E-11	5.95E-09	9.63E-02
Metap2	6.66E-11	6.20E-09	9.62E-02
Emp1	7.25E-11	6.71E-09	9.60E-02
Serpinb6a	7.47E-11	6.87E-09	9.59E-02
Commd9	7.58E-11	6.94E-09	9.59E-02
Sod3	7.75E-11	7.05E-09	9.58E-02
Fn1	8.32E-11	7.53E-09	9.57E-02
Glrx5	8.58E-11	7.72E-09	9.56E-02
Mrps17	8.70E-11	7.78E-09	9.56E-02
Mrpl34	9.02E-11	7.99E-09	9.55E-02
Col4a1	9.10E-11	8.01E-09	9.55E-02
Arl6ip5	9.43E-11	8.21E-09	9.54E-02
Il11ra1	9.76E-11	8.40E-09	9.53E-02
Gusb	9.94E-11	8.52E-09	9.53E-02
Sf3b5	1.02E-10	8.68E-09	9.52E-02
Fkrp	1.03E-10	8.71E-09	9.52E-02
Vapb	1.06E-10	8.87E-09	9.51E-02
Rnf4	1.14E-10	9.45E-09	9.50E-02

Surf4	1.15E-10	9.47E-09	9.50E-02
Fam162a	1.15E-10	9.48E-09	9.49E-02
Bola3	1.18E-10	9.59E-09	9.49E-02
Glmf	1.18E-10	9.59E-09	9.49E-02
Fbxo32	1.28E-10	1.04E-08	9.47E-02
Cpe	1.37E-10	1.10E-08	9.46E-02
Pdzd11	1.41E-10	1.13E-08	9.45E-02
Tpp1	1.44E-10	1.14E-08	9.45E-02
Tmx2	1.50E-10	1.18E-08	9.44E-02
Pno1	1.55E-10	1.21E-08	9.43E-02
Hist1h1c	1.62E-10	1.26E-08	9.42E-02
Psmb5	1.66E-10	1.28E-08	9.41E-02
Psmd12	1.67E-10	1.28E-08	9.41E-02
Ogdh	1.70E-10	1.29E-08	9.41E-02
Knop1	1.74E-10	1.32E-08	9.40E-02
Dda1	1.78E-10	1.34E-08	9.40E-02
Mrps34	1.83E-10	1.38E-08	9.39E-02
Lrp1	1.89E-10	1.41E-08	9.38E-02
Myo1c	1.91E-10	1.42E-08	9.38E-02
Atic	1.93E-10	1.43E-08	9.38E-02
Gpr180	2.01E-10	1.48E-08	9.37E-02
Srp19	2.07E-10	1.52E-08	9.36E-02
Pcnp	2.11E-10	1.53E-08	9.36E-02
Cab39	2.16E-10	1.57E-08	9.35E-02
Mrpl17	2.21E-10	1.59E-08	9.35E-02
Atraid	2.22E-10	1.59E-08	9.35E-02
Psmd1	2.33E-10	1.67E-08	9.34E-02
Pdha1	2.42E-10	1.72E-08	9.33E-02
Nubp2	2.49E-10	1.76E-08	9.32E-02
Fam20c	2.50E-10	1.76E-08	9.32E-02
Pank3	2.56E-10	1.80E-08	9.32E-02
Pgam1	2.68E-10	1.86E-08	9.31E-02
Ssr2	2.71E-10	1.88E-08	9.30E-02
Tmem208	2.88E-10	1.97E-08	9.29E-02
Sep15	3.02E-10	2.06E-08	9.28E-02
Yipf4	3.08E-10	2.09E-08	9.27E-02
Nme6	3.09E-10	2.09E-08	9.27E-02
Wdr83os	3.24E-10	2.17E-08	9.26E-02
Mid1	3.28E-10	2.19E-08	9.26E-02
Ube2m	3.36E-10	2.23E-08	9.25E-02
Lpcat3	3.43E-10	2.27E-08	9.25E-02
Mrpl44	3.46E-10	2.28E-08	9.25E-02
Rwdd1	3.51E-10	2.30E-08	9.24E-02
Ubxn6	3.54E-10	2.32E-08	9.24E-02

Dnajc15	3.58E-10	2.33E-08	9.24E-02
Immp1l	3.60E-10	2.33E-08	9.24E-02
Rnf5	3.65E-10	2.36E-08	9.23E-02
BC031181	3.88E-10	2.47E-08	9.22E-02
Rab10	4.07E-10	2.55E-08	9.21E-02
Osbpl8	4.08E-10	2.55E-08	9.21E-02
Mgst1	4.17E-10	2.60E-08	9.20E-02
Serpinh1	4.22E-10	2.62E-08	9.20E-02
Apbb2	4.32E-10	2.65E-08	9.20E-02
Ndufa10	4.43E-10	2.70E-08	9.19E-02
Mlec	4.51E-10	2.71E-08	9.19E-02
Purb	4.51E-10	2.71E-08	9.19E-02
Cyfp1	4.61E-10	2.75E-08	9.18E-02
Wisp2	4.63E-10	2.76E-08	9.18E-02
Timm8b	4.81E-10	2.84E-08	9.17E-02
Commd2	4.83E-10	2.84E-08	9.17E-02
Ndufc1	4.83E-10	2.84E-08	9.17E-02
U2af1l4	4.92E-10	2.89E-08	9.17E-02
Mmp3	4.99E-10	2.91E-08	9.16E-02
AI427809	5.09E-10	2.96E-08	9.16E-02
Lipa	5.16E-10	2.98E-08	9.16E-02
Srp14	5.16E-10	2.98E-08	9.16E-02
Ghitm	5.17E-10	2.98E-08	9.16E-02
Rtn3	5.19E-10	2.98E-08	9.15E-02
Echs1	5.20E-10	2.98E-08	9.15E-02
Atp5g1	5.29E-10	3.02E-08	9.15E-02
Slc6a8	5.40E-10	3.07E-08	9.15E-02
Htr2b	5.43E-10	3.07E-08	9.14E-02
Cetn3	5.72E-10	3.22E-08	9.13E-02
Ndufs6	5.74E-10	3.22E-08	9.13E-02
Hypk	5.80E-10	3.25E-08	9.13E-02
Dpep2	6.05E-10	3.38E-08	9.12E-02
Pdlim4	6.41E-10	3.55E-08	9.11E-02
Cyt11	6.57E-10	3.63E-08	9.10E-02
Tmem160	6.78E-10	3.71E-08	9.09E-02
Slc25a51	6.78E-10	3.71E-08	9.09E-02
Tmem86a	6.85E-10	3.73E-08	9.09E-02
Ctsl	7.18E-10	3.88E-08	9.08E-02
Dtymk	7.21E-10	3.88E-08	9.08E-02
1810037117Rik	7.98E-10	4.26E-08	9.05E-02
Pnkd	8.38E-10	4.44E-08	9.04E-02
I7Rn6	8.61E-10	4.55E-08	9.04E-02
Znrf1	8.72E-10	4.59E-08	9.03E-02
Gpr137b-ps	8.80E-10	4.62E-08	9.03E-02

Snx15	8.88E-10	4.65E-08	9.03E-02
Smpdl3a	8.91E-10	4.65E-08	9.03E-02
Scoc	8.99E-10	4.67E-08	9.03E-02
Glb1	9.01E-10	4.67E-08	9.03E-02
Eif5b	9.57E-10	4.94E-08	9.01E-02
Cald1	9.65E-10	4.97E-08	9.01E-02
Pebp1	1.01E-09	5.16E-08	9.00E-02
Ppt2	1.01E-09	5.16E-08	9.00E-02
Chmp2b	1.02E-09	5.18E-08	9.00E-02
Postn	1.04E-09	5.26E-08	8.99E-02
P4hb	1.04E-09	5.28E-08	8.99E-02
Chmp6	1.07E-09	5.34E-08	8.99E-02
Ndufa7	1.07E-09	5.34E-08	8.99E-02
Dctn6	1.09E-09	5.43E-08	8.98E-02
Pdgfa	1.09E-09	5.43E-08	8.98E-02
Mocs2	1.10E-09	5.43E-08	8.98E-02
Ecm1	1.10E-09	5.44E-08	8.98E-02
Gde1	1.11E-09	5.45E-08	8.98E-02
Sharpin	1.11E-09	5.46E-08	8.98E-02
Eif6	1.12E-09	5.50E-08	8.97E-02
Bag1	1.13E-09	5.52E-08	8.97E-02
Psmd5	1.16E-09	5.63E-08	8.97E-02
Nutf2	1.17E-09	5.67E-08	8.97E-02
Ccdc91	1.21E-09	5.83E-08	8.96E-02
Mrps33	1.22E-09	5.85E-08	8.95E-02
Lat2	1.26E-09	6.01E-08	8.95E-02
Atg5	1.27E-09	6.04E-08	8.95E-02
Timm17b	1.28E-09	6.05E-08	8.94E-02
Csrp1	1.28E-09	6.05E-08	8.94E-02
Cyb5r4	1.29E-09	6.05E-08	8.94E-02
Caprin1	1.30E-09	6.11E-08	8.94E-02
Rassf3	1.34E-09	6.27E-08	8.93E-02
Aebp1	1.34E-09	6.27E-08	8.93E-02
Nip7	1.38E-09	6.44E-08	8.93E-02
Wls	1.45E-09	6.70E-08	8.91E-02
Mrpl4	1.49E-09	6.89E-08	8.91E-02
Csf2rb2	1.54E-09	7.05E-08	8.90E-02
Mpc2	1.57E-09	7.18E-08	8.90E-02
Cd22	1.58E-09	7.19E-08	8.89E-02
Ahcyl1	1.58E-09	7.20E-08	8.89E-02
Epas1	1.61E-09	7.30E-08	8.89E-02
Rab18	1.61E-09	7.30E-08	8.89E-02
AY036118	1.63E-09	7.34E-08	8.89E-02
Polr2j	1.64E-09	7.37E-08	8.88E-02

Commd3	1.69E-09	7.49E-08	8.88E-02
Comtd1	1.69E-09	7.49E-08	8.88E-02
Ckap4	1.69E-09	7.49E-08	8.88E-02
Creb3l1	1.75E-09	7.69E-08	8.87E-02
Kdelr1	1.75E-09	7.69E-08	8.87E-02
Klc4	1.78E-09	7.78E-08	8.87E-02
Phlda3	1.82E-09	7.94E-08	8.86E-02
Sypl	1.84E-09	7.97E-08	8.86E-02
Prdx4	1.84E-09	7.97E-08	8.86E-02
Ssbp1	1.88E-09	8.13E-08	8.85E-02
Sptssa	1.90E-09	8.17E-08	8.85E-02
Msrbl1	1.92E-09	8.21E-08	8.85E-02
Qdpr	1.93E-09	8.23E-08	8.85E-02
Cpq	1.98E-09	8.42E-08	8.84E-02
Mkl2	2.10E-09	8.88E-08	8.83E-02
Mrps28	2.14E-09	8.98E-08	8.82E-02
Rbp1	2.15E-09	8.99E-08	8.82E-02
Sigmar1	2.16E-09	9.01E-08	8.82E-02
Slc25a4	2.23E-09	9.29E-08	8.81E-02
Copa	2.25E-09	9.32E-08	8.81E-02
Psmc7	2.33E-09	9.60E-08	8.80E-02
Fth1	2.43E-09	9.95E-08	8.79E-02
Ostc	2.45E-09	1.00E-07	8.79E-02
Cat	2.52E-09	1.02E-07	8.78E-02
Tsfm	2.52E-09	1.02E-07	8.78E-02
Ndufb6	2.55E-09	1.03E-07	8.78E-02
Mpv17l2	2.68E-09	1.08E-07	8.77E-02
Paox	2.71E-09	1.09E-07	8.77E-02
1110008F13Rik	2.72E-09	1.09E-07	8.76E-02
Spryd3	2.84E-09	1.13E-07	8.75E-02
Mpc1	2.90E-09	1.15E-07	8.75E-02
Tmem30a	2.91E-09	1.15E-07	8.75E-02
Bola1	2.94E-09	1.16E-07	8.75E-02
Timm17a	2.98E-09	1.18E-07	8.74E-02
Acp2	3.03E-09	1.19E-07	8.74E-02
Plgrkt	3.05E-09	1.20E-07	8.74E-02
Iqsec1	3.10E-09	1.21E-07	8.73E-02
Htra1	3.13E-09	1.22E-07	8.73E-02
Alg3	3.17E-09	1.23E-07	8.73E-02
Gm10269	3.21E-09	1.24E-07	8.72E-02
Chchd10	3.23E-09	1.25E-07	8.72E-02
Cdk4	3.35E-09	1.29E-07	8.71E-02
Ap2s1	3.36E-09	1.29E-07	8.71E-02
Timp3	3.42E-09	1.31E-07	8.71E-02

Bcas3	3.43E-09	1.31E-07	8.71E-02
Ddx1	3.46E-09	1.32E-07	8.71E-02
Glipr1	3.64E-09	1.37E-07	8.69E-02
Smarcd1	3.67E-09	1.38E-07	8.69E-02
Srsf6	3.68E-09	1.38E-07	8.69E-02
Vdac2	3.70E-09	1.38E-07	8.69E-02
Gga2	3.78E-09	1.41E-07	8.68E-02
Cers2	3.84E-09	1.43E-07	8.68E-02
Cebpzos	3.88E-09	1.44E-07	8.68E-02
Bhlhe41	3.90E-09	1.44E-07	8.68E-02
Slc48a1	3.93E-09	1.45E-07	8.68E-02
Tex261	3.99E-09	1.47E-07	8.67E-02
Mid1ip1	4.03E-09	1.48E-07	8.67E-02
Tmem165	4.04E-09	1.48E-07	8.67E-02
Ano6	4.06E-09	1.48E-07	8.67E-02
Spsb4	4.06E-09	1.48E-07	8.67E-02
Ttc1	4.07E-09	1.48E-07	8.67E-02
Ttc7b	4.09E-09	1.48E-07	8.67E-02
Samd8	4.16E-09	1.50E-07	8.66E-02
Lamtor2	4.17E-09	1.50E-07	8.66E-02
Fabp4	4.22E-09	1.51E-07	8.66E-02
Eif3j2	4.30E-09	1.54E-07	8.65E-02
Acox1	4.33E-09	1.54E-07	8.65E-02
Pdrg1	4.34E-09	1.54E-07	8.65E-02
Lrpap1	4.36E-09	1.55E-07	8.65E-02
Med21	4.45E-09	1.57E-07	8.65E-02
Sfr1	4.48E-09	1.58E-07	8.64E-02
Fdx1l	4.51E-09	1.58E-07	8.64E-02
Hsd17b4	4.59E-09	1.61E-07	8.64E-02
Tmco1	4.70E-09	1.64E-07	8.63E-02
Mrps24	5.01E-09	1.74E-07	8.62E-02
Nras	5.06E-09	1.75E-07	8.61E-02
Mfhas1	5.09E-09	1.75E-07	8.61E-02
Sfrp2	5.10E-09	1.75E-07	8.61E-02
Gm8973	5.11E-09	1.75E-07	8.61E-02
Lamtor5	5.27E-09	1.80E-07	8.60E-02
Gm10094	5.29E-09	1.80E-07	8.60E-02
Gns	5.32E-09	1.81E-07	8.60E-02
Atp2a2	5.36E-09	1.82E-07	8.60E-02
1110008P14Rik	5.58E-09	1.88E-07	8.59E-02
Mmp14	5.77E-09	1.93E-07	8.58E-02
Tns3	5.86E-09	1.95E-07	8.58E-02
Gba	5.87E-09	1.95E-07	8.58E-02
Calm1	5.96E-09	1.98E-07	8.57E-02

Srprb	6.03E-09	2.00E-07	8.57E-02
Ctbp1	6.07E-09	2.01E-07	8.57E-02
Rab11a	6.10E-09	2.01E-07	8.57E-02
Pqlc2	6.23E-09	2.05E-07	8.56E-02
Prdx1	6.39E-09	2.08E-07	8.56E-02
Galns	6.46E-09	2.10E-07	8.55E-02
Lpp	6.46E-09	2.10E-07	8.55E-02
Nfic	6.55E-09	2.12E-07	8.55E-02
Pkib	6.61E-09	2.13E-07	8.55E-02
Gorasp2	6.63E-09	2.14E-07	8.55E-02
Pdap1	6.65E-09	2.14E-07	8.55E-02
Ubr4	6.74E-09	2.16E-07	8.54E-02
Usf2	6.76E-09	2.16E-07	8.54E-02
Ndufb9	6.84E-09	2.18E-07	8.54E-02
Mgst3	6.85E-09	2.18E-07	8.54E-02
Syne1	6.88E-09	2.18E-07	8.54E-02
Sf3b4	7.07E-09	2.24E-07	8.53E-02
Smim7	7.14E-09	2.26E-07	8.53E-02
Foxk2	7.22E-09	2.27E-07	8.53E-02
Nop10	7.43E-09	2.33E-07	8.52E-02
Nptn	7.91E-09	2.47E-07	8.50E-02
Hibadh	8.03E-09	2.50E-07	8.50E-02
Mrpl41	8.08E-09	2.51E-07	8.50E-02
Phf5a	8.19E-09	2.54E-07	8.50E-02
Jtb	8.24E-09	2.55E-07	8.49E-02
Rai14	8.45E-09	2.60E-07	8.49E-02
Mfsd12	8.54E-09	2.62E-07	8.49E-02
Dstn	8.77E-09	2.68E-07	8.48E-02
Desi2	8.98E-09	2.73E-07	8.47E-02
Skp1a	9.11E-09	2.75E-07	8.47E-02
Lhfpl2	9.11E-09	2.75E-07	8.47E-02
Mif	9.24E-09	2.79E-07	8.47E-02
Eri3	9.28E-09	2.79E-07	8.46E-02
Mrpl43	9.31E-09	2.80E-07	8.46E-02
Wdr83	9.55E-09	2.86E-07	8.46E-02
Mrps14	9.67E-09	2.89E-07	8.45E-02
Ift74	9.80E-09	2.92E-07	8.45E-02
Lsm7	9.85E-09	2.93E-07	8.45E-02
Steap3	9.93E-09	2.95E-07	8.45E-02
Tm2d1	1.01E-08	2.99E-07	8.44E-02
Sae1	1.02E-08	3.02E-07	8.44E-02
Oxsm	1.04E-08	3.06E-07	8.44E-02
Ier3ip1	1.04E-08	3.07E-07	8.44E-02
Coq2	1.04E-08	3.07E-07	8.44E-02

Akip1	1.09E-08	3.19E-07	8.42E-02
Dpp7	1.09E-08	3.19E-07	8.42E-02
Lmna	1.09E-08	3.19E-07	8.42E-02
Ndufb4	1.14E-08	3.30E-07	8.41E-02
Nudcd2	1.15E-08	3.32E-07	8.41E-02
Med29	1.16E-08	3.35E-07	8.41E-02
Gm9774	1.17E-08	3.36E-07	8.41E-02
Mrpl42	1.17E-08	3.37E-07	8.41E-02
1810058I24Rik	1.18E-08	3.39E-07	8.40E-02
Mrps25	1.20E-08	3.42E-07	8.40E-02
Eci1	1.22E-08	3.47E-07	8.40E-02
Snx12	1.26E-08	3.59E-07	8.39E-02
Sash1	1.28E-08	3.62E-07	8.38E-02
Trappc4	1.30E-08	3.65E-07	8.38E-02
Deb1	1.30E-08	3.65E-07	8.38E-02
Pcmt1	1.30E-08	3.66E-07	8.38E-02
Mrps36	1.31E-08	3.67E-07	8.38E-02
Ywhag	1.32E-08	3.69E-07	8.38E-02
Ubash3b	1.33E-08	3.71E-07	8.37E-02
Adam8	1.35E-08	3.75E-07	8.37E-02
Tax1bp3	1.35E-08	3.75E-07	8.37E-02
Ndufa1	1.39E-08	3.86E-07	8.36E-02
Usp50	1.45E-08	3.99E-07	8.35E-02
Dyntl3	1.45E-08	3.99E-07	8.35E-02
Plin3	1.45E-08	3.99E-07	8.35E-02
Btk	1.45E-08	3.99E-07	8.35E-02
Ssr1	1.45E-08	3.99E-07	8.35E-02
Fam213a	1.48E-08	4.08E-07	8.35E-02
Gm10031	1.49E-08	4.08E-07	8.35E-02
Bach2os	1.49E-08	4.08E-07	8.35E-02
Mrpl55	1.53E-08	4.18E-07	8.34E-02
Dlat	1.56E-08	4.25E-07	8.33E-02
Otud6b	1.61E-08	4.37E-07	8.33E-02
Timm10	1.62E-08	4.38E-07	8.33E-02
Plec	1.67E-08	4.51E-07	8.32E-02
Sap18	1.68E-08	4.53E-07	8.32E-02
Col6a1	1.68E-08	4.53E-07	8.32E-02
Rab2a	1.73E-08	4.66E-07	8.31E-02
Clip1	1.74E-08	4.66E-07	8.31E-02
Mrps16	1.74E-08	4.67E-07	8.31E-02
Glo1	1.76E-08	4.69E-07	8.30E-02
Bcas2	1.76E-08	4.69E-07	8.30E-02
Slc37a2	1.76E-08	4.69E-07	8.30E-02
Gm5426	1.76E-08	4.69E-07	8.30E-02

Ctnnb1	1.79E-08	4.75E-07	8.30E-02
Itga9	1.84E-08	4.88E-07	8.29E-02
Psm4	1.85E-08	4.90E-07	8.29E-02
Rab1b	1.88E-08	4.96E-07	8.29E-02
Ctsa	1.89E-08	4.99E-07	8.29E-02
Dhrs1	1.90E-08	5.00E-07	8.28E-02
Lrp12	1.92E-08	5.02E-07	8.28E-02
Slc35b1	1.92E-08	5.02E-07	8.28E-02
Papola	1.93E-08	5.05E-07	8.28E-02
Mrpl20	1.94E-08	5.05E-07	8.28E-02
Rnaseh2c	1.96E-08	5.10E-07	8.28E-02
Plpp3	1.98E-08	5.15E-07	8.27E-02
Atp6v0b	2.00E-08	5.17E-07	8.27E-02
Nme2	2.00E-08	5.18E-07	8.27E-02
Arl3	2.04E-08	5.27E-07	8.27E-02
Zak	2.09E-08	5.38E-07	8.26E-02
Ndufs5	2.10E-08	5.40E-07	8.26E-02
Ube2v1	2.12E-08	5.43E-07	8.26E-02
Vkorc1	2.13E-08	5.45E-07	8.26E-02
Tspan3	2.13E-08	5.45E-07	8.26E-02
S100a1	2.14E-08	5.47E-07	8.25E-02
Tpi1	2.15E-08	5.48E-07	8.25E-02
2610001J05Rik	2.19E-08	5.56E-07	8.25E-02
Anxa2	2.21E-08	5.60E-07	8.25E-02
Wbp1l	2.24E-08	5.67E-07	8.24E-02
Mtss1	2.24E-08	5.67E-07	8.24E-02
Lrrc27	2.26E-08	5.72E-07	8.24E-02
Wsb2	2.29E-08	5.77E-07	8.24E-02
Kcmf1	2.33E-08	5.84E-07	8.23E-02
Pdia6	2.37E-08	5.93E-07	8.23E-02
Npy	2.40E-08	5.99E-07	8.23E-02
B430306N03Rik	2.43E-08	6.04E-07	8.22E-02
Cd63	2.46E-08	6.08E-07	8.22E-02
Hdhd2	2.54E-08	6.24E-07	8.21E-02
Psm4	2.60E-08	6.36E-07	8.21E-02
Atp6v1e1	2.60E-08	6.36E-07	8.20E-02
Acadsb	2.65E-08	6.47E-07	8.20E-02
Tom1	2.76E-08	6.71E-07	8.19E-02
Cript	2.77E-08	6.73E-07	8.19E-02
Rdx	2.78E-08	6.74E-07	8.19E-02
Bckdk	2.79E-08	6.75E-07	8.19E-02
Tmem242	2.80E-08	6.77E-07	8.19E-02
Vps4b	2.82E-08	6.81E-07	8.18E-02
Psmg1	2.83E-08	6.82E-07	8.18E-02

Rfk	2.84E-08	6.83E-07	8.18E-02
Gm12166	2.85E-08	6.83E-07	8.18E-02
Ap1s1	2.89E-08	6.90E-07	8.18E-02
Thap7	2.90E-08	6.91E-07	8.18E-02
Dnajb14	2.94E-08	7.01E-07	8.17E-02
Tns1	2.97E-08	7.06E-07	8.17E-02
Faim	2.97E-08	7.06E-07	8.17E-02
Tlk1	3.04E-08	7.21E-07	8.16E-02
Rab6a	3.09E-08	7.30E-07	8.16E-02
Ank	3.10E-08	7.31E-07	8.16E-02
0610010K14Rik	3.24E-08	7.61E-07	8.15E-02
Ndufs1	3.30E-08	7.73E-07	8.14E-02
Tubb4b	3.33E-08	7.80E-07	8.14E-02
Sdhc	3.43E-08	7.98E-07	8.13E-02
Anpep	3.46E-08	8.03E-07	8.13E-02
Pdcd6	3.46E-08	8.03E-07	8.13E-02
Ywhaq	3.46E-08	8.03E-07	8.13E-02
Glr2	3.48E-08	8.04E-07	8.13E-02
Carkd	3.48E-08	8.04E-07	8.13E-02
Gm7808	3.51E-08	8.07E-07	8.13E-02
Tomm6	3.58E-08	8.22E-07	8.12E-02
Bbip1	3.62E-08	8.27E-07	8.12E-02
Akirin1	3.63E-08	8.27E-07	8.12E-02
Fnip2	3.63E-08	8.27E-07	8.12E-02
Apoo	3.65E-08	8.30E-07	8.12E-02
Tpgs1	3.70E-08	8.40E-07	8.11E-02
Secisbp2l	3.73E-08	8.44E-07	8.11E-02
Dhx32	3.79E-08	8.56E-07	8.11E-02
Wdr77	3.82E-08	8.60E-07	8.11E-02
Gabarapl1	3.83E-08	8.60E-07	8.11E-02
2210016F16Rik	3.84E-08	8.62E-07	8.10E-02
Reep5	3.86E-08	8.66E-07	8.10E-02
Zfp91	3.88E-08	8.69E-07	8.10E-02
Mmadhc	3.88E-08	8.69E-07	8.10E-02
Serpine2	3.90E-08	8.72E-07	8.10E-02
Lyz1	3.91E-08	8.72E-07	8.10E-02
1500015O10Rik	3.94E-08	8.78E-07	8.10E-02
ldh3a	4.00E-08	8.91E-07	8.09E-02
Tmem106b	4.04E-08	8.97E-07	8.09E-02
Txnl4a	4.05E-08	8.97E-07	8.09E-02
Sumf1	4.07E-08	8.98E-07	8.09E-02
Atp1b3	4.07E-08	8.98E-07	8.09E-02
Dtd2	4.08E-08	8.99E-07	8.09E-02
Yeats4	4.09E-08	8.99E-07	8.09E-02

Hdgf	4.14E-08	9.09E-07	8.08E-02
Timm22	4.18E-08	9.17E-07	8.08E-02
Magt1	4.25E-08	9.31E-07	8.08E-02
Gstm5	4.27E-08	9.35E-07	8.08E-02
Nek6	4.34E-08	9.48E-07	8.07E-02
Oaz2	4.35E-08	9.49E-07	8.07E-02
Crtap	4.37E-08	9.52E-07	8.07E-02
Snrnp27	4.39E-08	9.55E-07	8.07E-02
Cib1	4.43E-08	9.62E-07	8.07E-02
Cdv3	4.46E-08	9.67E-07	8.07E-02
1110004F10Rik	4.46E-08	9.67E-07	8.07E-02
Sdccag3	4.52E-08	9.76E-07	8.06E-02
Pafah1b1	4.61E-08	9.93E-07	8.06E-02
Ppa1	4.64E-08	9.97E-07	8.06E-02
Angpt2	4.66E-08	1.00E-06	8.05E-02
Cyb5r1	4.67E-08	1.00E-06	8.05E-02
Zranb2	4.67E-08	1.00E-06	8.05E-02
Mmp27	4.77E-08	1.02E-06	8.05E-02
Sar1a	4.86E-08	1.03E-06	8.04E-02
Bet1	4.87E-08	1.03E-06	8.04E-02
Pkd1	4.97E-08	1.05E-06	8.04E-02
Ap3m1	5.02E-08	1.06E-06	8.03E-02
Pgrmc1	5.05E-08	1.06E-06	8.03E-02
Eea1	5.05E-08	1.06E-06	8.03E-02
Gm4950	5.11E-08	1.07E-06	8.03E-02
Ormdl1	5.12E-08	1.07E-06	8.03E-02
Myof	5.13E-08	1.07E-06	8.03E-02
Snx3	5.17E-08	1.08E-06	8.03E-02
Col5a2	5.29E-08	1.10E-06	8.02E-02
Tmx4	5.41E-08	1.13E-06	8.01E-02
Tbc1d7	5.48E-08	1.14E-06	8.01E-02
Snrpd3	5.50E-08	1.14E-06	8.01E-02
B3gat3	5.66E-08	1.17E-06	8.00E-02
Coq7	5.68E-08	1.18E-06	8.00E-02
Tmem120a	5.81E-08	1.20E-06	8.00E-02
Cnih1	5.82E-08	1.20E-06	8.00E-02
0610009B22Rik	5.83E-08	1.20E-06	8.00E-02
Frrs1	5.91E-08	1.22E-06	7.99E-02
Taldo1	5.95E-08	1.22E-06	7.99E-02
Tceal8	5.96E-08	1.22E-06	7.99E-02
Lrrfip2	5.97E-08	1.22E-06	7.99E-02
Atp6ap1	5.98E-08	1.22E-06	7.99E-02
Emc8	6.00E-08	1.23E-06	7.99E-02
Gm5900	6.10E-08	1.25E-06	7.98E-02

Cluh	6.21E-08	1.27E-06	7.98E-02
Tmf1	6.33E-08	1.29E-06	7.97E-02
Bnip3l	6.34E-08	1.29E-06	7.97E-02
Atp5g2	6.41E-08	1.30E-06	7.97E-02
Triap1	6.48E-08	1.31E-06	7.97E-02
Glyr1	6.55E-08	1.32E-06	7.96E-02
Zmynd8	6.56E-08	1.32E-06	7.96E-02
Mrpl49	6.62E-08	1.34E-06	7.96E-02
Zcrb1	6.63E-08	1.34E-06	7.96E-02
Prelp	6.67E-08	1.34E-06	7.96E-02
Tomm20	6.79E-08	1.36E-06	7.95E-02
Eif1a	6.83E-08	1.37E-06	7.95E-02
Snrpd1	6.84E-08	1.37E-06	7.95E-02
Emc9	6.84E-08	1.37E-06	7.95E-02
Ercc1	7.00E-08	1.39E-06	7.95E-02
Emc3	7.06E-08	1.41E-06	7.94E-02
March2	7.09E-08	1.41E-06	7.94E-02
Ldha	7.28E-08	1.44E-06	7.94E-02
Gm10320	7.32E-08	1.44E-06	7.94E-02
Pqlc3	7.46E-08	1.47E-06	7.93E-02
Hcfc1r1	7.51E-08	1.47E-06	7.93E-02
Abtb1	7.52E-08	1.47E-06	7.93E-02
Hexb	7.59E-08	1.49E-06	7.93E-02
Nme1	7.65E-08	1.50E-06	7.92E-02
Naglu	7.73E-08	1.51E-06	7.92E-02
Cops3	7.86E-08	1.53E-06	7.92E-02
Alg1	7.90E-08	1.54E-06	7.92E-02
Spsb2	8.00E-08	1.55E-06	7.91E-02
Brd7	8.05E-08	1.56E-06	7.91E-02
Gm16286	8.07E-08	1.56E-06	7.91E-02
Commd5	8.10E-08	1.56E-06	7.91E-02
Abi3	8.31E-08	1.59E-06	7.90E-02
Rfesd	8.39E-08	1.61E-06	7.90E-02
Polr2m	8.44E-08	1.61E-06	7.90E-02
Slc25a3	8.49E-08	1.62E-06	7.90E-02
Abcd3	8.50E-08	1.62E-06	7.90E-02
Ptgr1	8.62E-08	1.64E-06	7.89E-02
Borcs7	8.62E-08	1.64E-06	7.89E-02
Hmgn1	8.67E-08	1.64E-06	7.89E-02
Polr2i	8.68E-08	1.65E-06	7.89E-02
Cdc34	8.76E-08	1.65E-06	7.89E-02
C1d	8.77E-08	1.65E-06	7.89E-02
Cdk18	9.00E-08	1.69E-06	7.88E-02
Tmem237	9.25E-08	1.73E-06	7.87E-02

Dapk3	9.29E-08	1.74E-06	7.87E-02
Hpcal1	9.35E-08	1.74E-06	7.87E-02
5031439G07Rik	9.36E-08	1.75E-06	7.87E-02
Armcx3	9.39E-08	1.75E-06	7.87E-02
Ormdl2	9.44E-08	1.75E-06	7.87E-02
Sgcb	9.50E-08	1.76E-06	7.87E-02
Mtch1	9.53E-08	1.77E-06	7.87E-02
Hnrnpa1	9.54E-08	1.77E-06	7.86E-02
Mbd3	9.58E-08	1.77E-06	7.86E-02
Aig1	9.68E-08	1.79E-06	7.86E-02
Tecr	9.81E-08	1.81E-06	7.86E-02
Lsm8	9.91E-08	1.82E-06	7.85E-02
Jagn1	9.97E-08	1.83E-06	7.85E-02
Col6a3	1.01E-07	1.85E-06	7.85E-02
4930455G09Rik	1.01E-07	1.85E-06	7.85E-02
Calm3	1.01E-07	1.86E-06	7.85E-02
9530068E07Rik	1.02E-07	1.86E-06	7.85E-02
Clptm1l	1.03E-07	1.88E-06	7.84E-02
Suclg1	1.03E-07	1.88E-06	7.84E-02
Derl2	1.03E-07	1.88E-06	7.84E-02
Sgk1	1.04E-07	1.89E-06	7.84E-02
Ctcf	1.05E-07	1.90E-06	7.84E-02
Txndc5	1.06E-07	1.92E-06	7.84E-02
Aes	1.07E-07	1.94E-06	7.83E-02
ltpa	1.08E-07	1.94E-06	7.83E-02
Mien1	1.09E-07	1.96E-06	7.83E-02
Acp1	1.09E-07	1.96E-06	7.83E-02
Slc39a11	1.11E-07	1.98E-06	7.83E-02
Tmem9b	1.11E-07	1.98E-06	7.83E-02
Ppp2ca	1.12E-07	2.00E-06	7.82E-02
Ten1	1.15E-07	2.05E-06	7.81E-02
Serinc1	1.16E-07	2.06E-06	7.81E-02
Ertec1	1.16E-07	2.06E-06	7.81E-02
Nr2c2ap	1.16E-07	2.06E-06	7.81E-02
Ubl4a	1.16E-07	2.06E-06	7.81E-02
Agap1	1.17E-07	2.07E-06	7.81E-02
Insig2	1.17E-07	2.08E-06	7.81E-02
Gemin7	1.18E-07	2.09E-06	7.81E-02
Trappc1	1.19E-07	2.09E-06	7.81E-02
Taf12	1.22E-07	2.14E-06	7.80E-02
Tardbp	1.22E-07	2.15E-06	7.80E-02
Uchl3	1.24E-07	2.17E-06	7.80E-02
Kcnq1ot1	1.24E-07	2.17E-06	7.79E-02
Pigyl	1.24E-07	2.17E-06	7.79E-02

Zfp260	1.25E-07	2.19E-06	7.79E-02
B230118H07Rik	1.26E-07	2.20E-06	7.79E-02
Ndufb2	1.26E-07	2.20E-06	7.79E-02
Zcchc9	1.27E-07	2.20E-06	7.79E-02
Mtpn	1.27E-07	2.21E-06	7.79E-02
Map4k3	1.28E-07	2.21E-06	7.79E-02
Scd1	1.28E-07	2.21E-06	7.79E-02
Spr	1.28E-07	2.21E-06	7.79E-02
Ap2m1	1.28E-07	2.21E-06	7.79E-02
Znhit1	1.30E-07	2.24E-06	7.78E-02
Polr2k	1.31E-07	2.24E-06	7.78E-02
Wfs1	1.33E-07	2.27E-06	7.78E-02
Coa4	1.33E-07	2.27E-06	7.78E-02
Nudt9	1.36E-07	2.32E-06	7.77E-02
Glud1	1.37E-07	2.33E-06	7.77E-02
Trappc3	1.37E-07	2.33E-06	7.77E-02
Pja2	1.39E-07	2.36E-06	7.76E-02
Arhgap19	1.39E-07	2.37E-06	7.76E-02
Gpx4	1.39E-07	2.37E-06	7.76E-02
Rnf11	1.40E-07	2.37E-06	7.76E-02
Rgs7	1.40E-07	2.37E-06	7.76E-02
Ndufa8	1.41E-07	2.38E-06	7.76E-02
Ctgf	1.41E-07	2.38E-06	7.76E-02
Mnat1	1.42E-07	2.39E-06	7.76E-02
Arl1	1.43E-07	2.40E-06	7.76E-02
Psmd10	1.45E-07	2.45E-06	7.75E-02
Asna1	1.47E-07	2.47E-06	7.75E-02
Timp1	1.48E-07	2.49E-06	7.75E-02
Bcap31	1.50E-07	2.51E-06	7.74E-02
Mettl9	1.50E-07	2.51E-06	7.74E-02
Paip2	1.50E-07	2.51E-06	7.74E-02
Hadh	1.52E-07	2.54E-06	7.74E-02
Anapc16	1.53E-07	2.54E-06	7.74E-02
Isca2	1.53E-07	2.54E-06	7.74E-02
Grpel1	1.53E-07	2.54E-06	7.74E-02
Timp2	1.53E-07	2.54E-06	7.74E-02
Smpd1	1.54E-07	2.55E-06	7.74E-02
Klc1	1.54E-07	2.55E-06	7.74E-02
Actn4	1.56E-07	2.58E-06	7.73E-02
Pafah1b2	1.57E-07	2.58E-06	7.73E-02
Pcbp1	1.61E-07	2.64E-06	7.72E-02
Dmxl2	1.61E-07	2.65E-06	7.72E-02
Phb	1.62E-07	2.66E-06	7.72E-02
Gabarapl2	1.62E-07	2.66E-06	7.72E-02

Lrrfip1	1.63E-07	2.67E-06	7.72E-02
Itgax	1.63E-07	2.68E-06	7.72E-02
Daglb	1.65E-07	2.69E-06	7.72E-02
Pcbd2	1.70E-07	2.77E-06	7.71E-02
Lpxn	1.72E-07	2.79E-06	7.71E-02
Man1c1	1.75E-07	2.82E-06	7.70E-02
Fis1	1.75E-07	2.83E-06	7.70E-02
Pithd1	1.76E-07	2.84E-06	7.70E-02
Abi1	1.76E-07	2.84E-06	7.70E-02
Wbp11	1.78E-07	2.87E-06	7.70E-02
Ado	1.80E-07	2.90E-06	7.69E-02
Gm11273	1.81E-07	2.90E-06	7.69E-02
Rhoc	1.81E-07	2.91E-06	7.69E-02
Hint2	1.85E-07	2.96E-06	7.69E-02
2310033P09Rik	1.86E-07	2.97E-06	7.69E-02
Aqp1	1.87E-07	2.98E-06	7.68E-02
Mrpl12	1.87E-07	2.99E-06	7.68E-02
Eif3i	1.90E-07	3.02E-06	7.68E-02
Scamp3	1.92E-07	3.04E-06	7.68E-02
Inf2	1.92E-07	3.05E-06	7.68E-02
Hmg20b	1.93E-07	3.05E-06	7.68E-02
Dohh	1.94E-07	3.07E-06	7.67E-02
Sec11c	1.94E-07	3.07E-06	7.67E-02
Mgat1	1.95E-07	3.09E-06	7.67E-02
Smg1	1.96E-07	3.09E-06	7.67E-02
Rnf187	1.96E-07	3.09E-06	7.67E-02
Atp6v1g1	1.99E-07	3.13E-06	7.67E-02
Tprgl	2.00E-07	3.15E-06	7.66E-02
Tarbp2	2.06E-07	3.22E-06	7.66E-02
Rwdd4a	2.06E-07	3.22E-06	7.66E-02
Hmbs	2.06E-07	3.23E-06	7.66E-02
Grcc10	2.07E-07	3.23E-06	7.66E-02
2310011J03Rik	2.07E-07	3.24E-06	7.66E-02
Cct5	2.09E-07	3.26E-06	7.65E-02
Fnta	2.10E-07	3.27E-06	7.65E-02
Atp5c1	2.11E-07	3.28E-06	7.65E-02
Kpna2	2.12E-07	3.29E-06	7.65E-02
Cd300lb	2.12E-07	3.29E-06	7.65E-02
Rexo2	2.13E-07	3.30E-06	7.65E-02
Tmem38b	2.17E-07	3.36E-06	7.64E-02
Mesdc1	2.22E-07	3.42E-06	7.64E-02
Acp5	2.22E-07	3.42E-06	7.64E-02
Psme4	2.23E-07	3.43E-06	7.64E-02
Irak1	2.23E-07	3.43E-06	7.63E-02

Sdhb	2.25E-07	3.45E-06	7.63E-02
Tmem43	2.25E-07	3.46E-06	7.63E-02
Ndufa5	2.26E-07	3.46E-06	7.63E-02
Ufc1	2.31E-07	3.53E-06	7.63E-02
Npc1	2.31E-07	3.53E-06	7.63E-02
Gadd45gip1	2.32E-07	3.54E-06	7.62E-02
Galnt6	2.33E-07	3.55E-06	7.62E-02
Sumo3	2.34E-07	3.55E-06	7.62E-02
Dctn4	2.36E-07	3.59E-06	7.62E-02
Mrpl13	2.37E-07	3.60E-06	7.62E-02
Dph3	2.41E-07	3.65E-06	7.61E-02
Psen2	2.42E-07	3.66E-06	7.61E-02
Agpat5	2.44E-07	3.69E-06	7.61E-02
Armc1	2.44E-07	3.69E-06	7.61E-02
Aspscr1	2.45E-07	3.69E-06	7.61E-02
Csnk2b	2.45E-07	3.70E-06	7.61E-02
Serpine1	2.47E-07	3.71E-06	7.61E-02
Ndufab1	2.47E-07	3.71E-06	7.61E-02
Psmc9	2.50E-07	3.75E-06	7.60E-02
Cyb561d2	2.56E-07	3.83E-06	7.60E-02
Ergic1	2.57E-07	3.83E-06	7.60E-02
Pmepa1	2.59E-07	3.86E-06	7.59E-02
Ece2	2.62E-07	3.90E-06	7.59E-02
Txnrd1	2.63E-07	3.90E-06	7.59E-02
Flna	2.64E-07	3.91E-06	7.59E-02
Cav2	2.64E-07	3.91E-06	7.59E-02
Hist1h2bc	2.64E-07	3.92E-06	7.59E-02
Myh9	2.66E-07	3.94E-06	7.59E-02
Pofut2	2.67E-07	3.95E-06	7.59E-02
Cd93	2.68E-07	3.96E-06	7.58E-02
Ost4	2.69E-07	3.97E-06	7.58E-02
Htatsf1	2.69E-07	3.97E-06	7.58E-02
Atp6v0a1	2.71E-07	4.00E-06	7.58E-02
Lsm4	2.76E-07	4.04E-06	7.58E-02
Fam213b	2.76E-07	4.04E-06	7.58E-02
Zfp706	2.76E-07	4.04E-06	7.58E-02
Sec13	2.77E-07	4.04E-06	7.58E-02
Pum2	2.77E-07	4.05E-06	7.58E-02
Mtg1	2.78E-07	4.05E-06	7.58E-02
Itpril2	2.78E-07	4.05E-06	7.57E-02
Mustn1	2.79E-07	4.06E-06	7.57E-02
Rell1	2.79E-07	4.06E-06	7.57E-02
Tceanc2	2.80E-07	4.07E-06	7.57E-02
Sec63	2.80E-07	4.07E-06	7.57E-02

Mocos	2.81E-07	4.07E-06	7.57E-02
Slc25a39	2.87E-07	4.15E-06	7.57E-02
Gm10073	2.90E-07	4.19E-06	7.56E-02
Lgals1	2.91E-07	4.20E-06	7.56E-02
Ddx18	2.91E-07	4.20E-06	7.56E-02
Ostm1	2.91E-07	4.20E-06	7.56E-02
Trp53inp2	2.93E-07	4.22E-06	7.56E-02
Cd276	2.94E-07	4.23E-06	7.56E-02
Hspb1	2.95E-07	4.23E-06	7.56E-02
Rpp25l	2.95E-07	4.23E-06	7.56E-02
Tsn	2.99E-07	4.28E-06	7.55E-02
Mtfr1	2.99E-07	4.29E-06	7.55E-02
Asph	3.06E-07	4.37E-06	7.55E-02
Ssr3	3.06E-07	4.37E-06	7.55E-02
Tnfrsf1b	3.12E-07	4.44E-06	7.54E-02
Bloc1s1	3.13E-07	4.46E-06	7.54E-02
Pigp	3.14E-07	4.46E-06	7.54E-02
Fam214b	3.17E-07	4.50E-06	7.54E-02
Ppp1r14b	3.24E-07	4.58E-06	7.53E-02
Myo9b	3.33E-07	4.70E-06	7.52E-02
Orc2	3.33E-07	4.70E-06	7.52E-02
Tmed4	3.39E-07	4.76E-06	7.52E-02
Chchd7	3.40E-07	4.77E-06	7.52E-02
Nucks1	3.44E-07	4.82E-06	7.52E-02
Upf1	3.44E-07	4.82E-06	7.52E-02
Nabp2	3.45E-07	4.83E-06	7.51E-02
Rab11b	3.46E-07	4.84E-06	7.51E-02
Fkbp4	3.49E-07	4.88E-06	7.51E-02
St13	3.51E-07	4.90E-06	7.51E-02
Cnpy2	3.52E-07	4.91E-06	7.51E-02
Snx24	3.54E-07	4.93E-06	7.51E-02
Sars	3.55E-07	4.94E-06	7.51E-02
Gid8	3.67E-07	5.09E-06	7.50E-02
Crls1	3.68E-07	5.09E-06	7.50E-02
Pls3	3.69E-07	5.10E-06	7.50E-02
Pqlc1	3.74E-07	5.15E-06	7.49E-02
Simap	3.74E-07	5.15E-06	7.49E-02
Cxcl12	3.75E-07	5.17E-06	7.49E-02
Emd	3.79E-07	5.21E-06	7.49E-02
Wdr74	3.79E-07	5.21E-06	7.49E-02
Il18bp	3.85E-07	5.29E-06	7.48E-02
Tsen34	3.86E-07	5.29E-06	7.48E-02
Iscu	3.88E-07	5.32E-06	7.48E-02
Ddx56	3.89E-07	5.32E-06	7.48E-02

Snapiin	3.91E-07	5.34E-06	7.48E-02
Mea1	3.92E-07	5.36E-06	7.48E-02
Nudt4	4.00E-07	5.46E-06	7.47E-02
Dnajc10	4.02E-07	5.48E-06	7.47E-02
Cnbp	4.04E-07	5.50E-06	7.47E-02
Rnf149	4.06E-07	5.51E-06	7.47E-02
Stra6l	4.13E-07	5.60E-06	7.46E-02
Ccdc124	4.15E-07	5.63E-06	7.46E-02
Thyn1	4.16E-07	5.64E-06	7.46E-02
Clec4d	4.19E-07	5.67E-06	7.46E-02
Rap2a	4.23E-07	5.72E-06	7.46E-02
Wbp4	4.24E-07	5.72E-06	7.46E-02
Scarb2	4.25E-07	5.72E-06	7.46E-02
Snip1	4.29E-07	5.77E-06	7.45E-02
Gm13305	4.30E-07	5.78E-06	7.45E-02
Fastkd3	4.35E-07	5.83E-06	7.45E-02
Tceb1	4.36E-07	5.84E-06	7.45E-02
Josd2	4.37E-07	5.84E-06	7.45E-02
Col18a1	4.37E-07	5.84E-06	7.45E-02
Yipf5	4.38E-07	5.84E-06	7.45E-02
Oxa1l	4.40E-07	5.87E-06	7.45E-02
Ube3a	4.41E-07	5.87E-06	7.45E-02
Pex2	4.42E-07	5.88E-06	7.45E-02
Fkbp1a	4.43E-07	5.89E-06	7.44E-02
Slirp	4.45E-07	5.90E-06	7.44E-02
Calr	4.47E-07	5.93E-06	7.44E-02
Gm561	4.56E-07	6.04E-06	7.44E-02
Anxa3	4.57E-07	6.04E-06	7.44E-02
Rps29	4.59E-07	6.06E-06	-7.43E-02
Mphosph6	4.59E-07	6.06E-06	7.43E-02
Col6a2	4.65E-07	6.13E-06	7.43E-02
Pkp4	4.66E-07	6.13E-06	7.43E-02
Slc25a1	4.69E-07	6.17E-06	7.43E-02
Tmem50b	4.70E-07	6.18E-06	7.43E-02
Vcam1	4.72E-07	6.21E-06	7.43E-02
Sncg	4.74E-07	6.22E-06	7.43E-02
Adprhl2	4.76E-07	6.23E-06	7.42E-02
Top1	4.78E-07	6.26E-06	7.42E-02
Denr	4.81E-07	6.29E-06	7.42E-02
Slc25a5	4.81E-07	6.29E-06	7.42E-02
Actr10	4.83E-07	6.29E-06	7.42E-02
Wrb	4.83E-07	6.29E-06	7.42E-02
Cpeb4	4.84E-07	6.30E-06	7.42E-02
Vegfb	4.86E-07	6.32E-06	7.42E-02

Hrsp12	4.91E-07	6.38E-06	7.42E-02
Rragc	5.01E-07	6.50E-06	7.41E-02
Ptms	5.03E-07	6.50E-06	7.41E-02
Gsk3a	5.03E-07	6.50E-06	7.41E-02
Gm10260	5.08E-07	6.56E-06	7.41E-02
Eepd1	5.11E-07	6.59E-06	7.40E-02
Pop5	5.14E-07	6.61E-06	7.40E-02
Caml	5.14E-07	6.62E-06	7.40E-02
Med8	5.16E-07	6.63E-06	7.40E-02
Ddb1	5.19E-07	6.66E-06	7.40E-02
Zbtb7a	5.20E-07	6.67E-06	7.40E-02
Trim35	5.22E-07	6.69E-06	7.40E-02
Max	5.23E-07	6.70E-06	7.40E-02
Vimp	5.26E-07	6.73E-06	7.40E-02
Trim47	5.31E-07	6.78E-06	7.39E-02
Hey1	5.32E-07	6.79E-06	7.39E-02
Sdc1	5.36E-07	6.84E-06	7.39E-02
Tcf12	5.42E-07	6.90E-06	7.39E-02
Snx1	5.44E-07	6.91E-06	7.39E-02
Shisa9	5.50E-07	6.98E-06	7.38E-02
Syt11	5.54E-07	7.02E-06	7.38E-02
Ptges3	5.59E-07	7.07E-06	7.38E-02
Pgk1	5.64E-07	7.12E-06	7.38E-02
Ppp2r1a	5.64E-07	7.12E-06	7.38E-02
Lima1	5.66E-07	7.14E-06	7.38E-02
Kif5b	5.67E-07	7.14E-06	7.38E-02
Mob2	5.68E-07	7.15E-06	7.37E-02
Acaa1a	5.68E-07	7.15E-06	7.37E-02
Pcnx	5.72E-07	7.19E-06	7.37E-02
Akr7a5	5.74E-07	7.21E-06	7.37E-02
Fam103a1	5.77E-07	7.24E-06	7.37E-02
Edem2	5.79E-07	7.26E-06	7.37E-02
Stam2	5.88E-07	7.35E-06	7.37E-02
Kcnn4	5.88E-07	7.35E-06	7.37E-02
Dars	6.06E-07	7.56E-06	7.36E-02
Dirc2	6.06E-07	7.56E-06	7.36E-02
Fam3c	6.07E-07	7.56E-06	7.36E-02
Mrpl14	6.08E-07	7.57E-06	7.36E-02
Ndufaf2	6.09E-07	7.58E-06	7.35E-02
Al413582	6.11E-07	7.59E-06	7.35E-02
Nono	6.12E-07	7.60E-06	7.35E-02
Trabd	6.13E-07	7.61E-06	7.35E-02
Rrs1	6.16E-07	7.63E-06	7.35E-02
Creg2	6.16E-07	7.63E-06	7.35E-02

Gnaq	6.19E-07	7.66E-06	7.35E-02
Emilin1	6.20E-07	7.66E-06	7.35E-02
Man2a1	6.20E-07	7.66E-06	7.35E-02
Mrpl50	6.21E-07	7.67E-06	7.35E-02
Snx14	6.23E-07	7.68E-06	7.35E-02
Mrps26	6.27E-07	7.73E-06	7.35E-02
Hsbp1	6.33E-07	7.79E-06	7.34E-02
Bsg	6.36E-07	7.82E-06	7.34E-02
Neurl2	6.45E-07	7.91E-06	7.34E-02
Rnaseh2b	6.53E-07	8.00E-06	7.34E-02
Ptp4a2	6.57E-07	8.05E-06	7.33E-02
Elof1	6.60E-07	8.07E-06	7.33E-02
Vcl	6.67E-07	8.13E-06	7.33E-02
Exoc3l4	6.69E-07	8.15E-06	7.33E-02
Med28	6.69E-07	8.15E-06	7.33E-02
Rps27l	6.72E-07	8.17E-06	7.33E-02
Fkbp3	6.74E-07	8.19E-06	7.33E-02
Hspbp1	6.77E-07	8.21E-06	7.32E-02
Myl6	6.80E-07	8.25E-06	7.32E-02
Sav1	6.83E-07	8.28E-06	7.32E-02
Stxbp2	6.88E-07	8.33E-06	7.32E-02
Hmox2	6.91E-07	8.35E-06	7.32E-02
Gsr	6.92E-07	8.35E-06	7.32E-02
1500011K16Rik	6.93E-07	8.35E-06	7.32E-02
Usp16	6.95E-07	8.38E-06	7.32E-02
Rp9	6.97E-07	8.39E-06	7.32E-02
Tmem167	6.99E-07	8.41E-06	7.32E-02
Eva1b	7.00E-07	8.41E-06	7.32E-02
Pwwp2b	7.04E-07	8.45E-06	7.31E-02
Tuba1c	7.09E-07	8.50E-06	7.31E-02
Ubxn8	7.10E-07	8.51E-06	7.31E-02
Med25	7.12E-07	8.53E-06	7.31E-02
Aggf1	7.15E-07	8.55E-06	7.31E-02
Dpy30	7.20E-07	8.59E-06	7.31E-02
Zc3h15	7.27E-07	8.67E-06	7.30E-02
Lztr1	7.30E-07	8.70E-06	7.30E-02
Ndrp1	7.35E-07	8.75E-06	7.30E-02
Gas2l1	7.40E-07	8.80E-06	7.30E-02
Abcf2	7.56E-07	8.97E-06	7.29E-02
Svbp	7.65E-07	9.06E-06	7.29E-02
Ubfd1	7.69E-07	9.09E-06	7.29E-02
Map2k3	7.76E-07	9.16E-06	7.29E-02
Csnk2a1	7.82E-07	9.22E-06	7.28E-02
Prkaca	7.86E-07	9.26E-06	7.28E-02

Fbxl15	7.86E-07	9.26E-06	7.28E-02
Mrpl28	7.92E-07	9.32E-06	7.28E-02
Qars	7.97E-07	9.37E-06	7.28E-02
Yif1a	7.98E-07	9.37E-06	7.28E-02
Mitf	7.98E-07	9.37E-06	7.28E-02
Fam32a	7.99E-07	9.37E-06	7.28E-02
Usp9x	8.04E-07	9.42E-06	7.28E-02
Rab35	8.09E-07	9.47E-06	7.27E-02
Dgcr6	8.19E-07	9.57E-06	7.27E-02
Ubr7	8.20E-07	9.57E-06	7.27E-02
Gcsh	8.21E-07	9.57E-06	7.27E-02
Mrps18a	8.25E-07	9.61E-06	7.27E-02
Colgalt1	8.31E-07	9.68E-06	7.27E-02
Mcoln3	8.32E-07	9.68E-06	7.27E-02
Snx27	8.35E-07	9.71E-06	7.26E-02
Abca1	8.39E-07	9.75E-06	7.26E-02
Tmem230	8.44E-07	9.80E-06	7.26E-02
Lars2	8.59E-07	9.95E-06	7.26E-02
Dnajc7	8.63E-07	9.99E-06	7.26E-02
Nagpa	8.64E-07	9.99E-06	7.26E-02
Slc38a1	8.64E-07	9.99E-06	7.25E-02

Table S10. List of main cholesterol esters (CE) and oxidized CE detected in lesions of 20-week-old LDAH^{+/+}/apoE^{-/-} (n=6) and LDAH^{-/-}/apoE^{-/-} (n=5) male littermate mice. Formulas and candidate lipids were obtained from m/z values inputs into LIPID MAPS “Bulk” Structure Searches tool. Two-tailed Mann-Whitney U test was used for CE 18:3, CE 20:5, and CE 22:6;O. All other comparisons were performed using two-tailed unpaired *t*-test.

m/z	Abduct	Formula	Lipid	Ratio Tg/WT	p-value
663.5477	K ⁺	C43H76O2K	CE 16:0	0.464	0.0099
661.532	K ⁺	C43H74O2K	CE 16:1	0.460	0.1465
691.5789	K ⁺	C45H80O2K	CE 18:0	0.407	0.0199
689.5633	K ⁺	C45H78O2K	CE 18:1	0.625	0.0838
687.5476	K ⁺	C45H76O2K	CE 18:2	0.739	0.1372
685.5319	K ⁺	C45H74O2K	CE 18:3	0.612	0.0519
715.579	K ⁺	C47H80O2K	CE 20:2	0.414	0.093
713.5634	K ⁺	C47H78O2K	CE 20:3	0.519	0.0511
711.5481	K ⁺	C47H76O2K	CE 20:4	0.649	0.0446
709.532	K ⁺	C47H74O2K	CE 20:5	0.642	0.1255
739.5792	K ⁺	C49H80O2K	CE 22:4	0.396	0.0239
737.5634	K ⁺	C49H78O2K	CE 22:5	0.522	0.062
735.5478	K ⁺	C49H76O2K	CE 22:6	0.590	0.0759
705.5583	K ⁺	C45H78O3K	CE 18:1;O	0.476	0.1071
703.5425	K ⁺	C45H76O3K	CE 18:2;O	0.593	0.1622
701.5269	K ⁺	C45H74O3K	CE 18:3;O	0.651	0.371
727.5428	K ⁺	C47H76O3K	CE 20:4;O	0.628	0.2468
751.5424	K ⁺	C49H76O3K	CE 22:6;O	0.454	0.1204