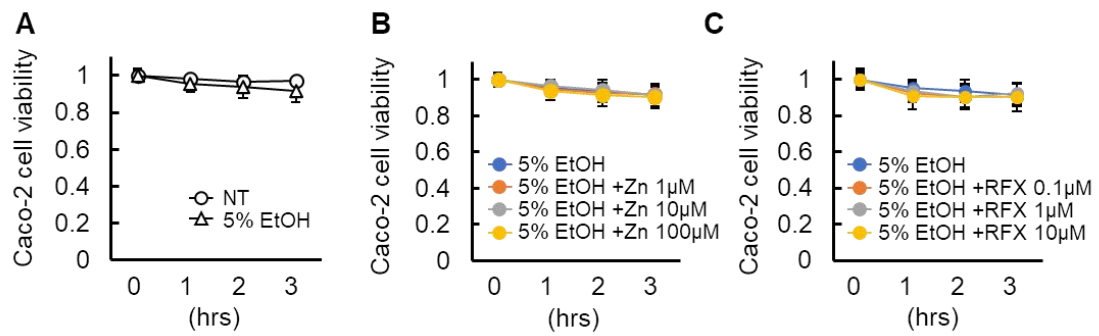


Supplementary Figure 1. Serum biochemistry in the ALD mice. A: Serum levels of copper (Cu); B: Blood urea nitrogen (BUN) and creatinine (Scr); C: γ -glutamyl transpeptidase (GGT), alkaline phosphatase (ALP) and albumin; D: Triglyceride (TG); E: Total-, high density lipoprotein (HDL)-, and low density lipoprotein (LDL)-cholesterol. Data are mean \pm SD ($n = 10$), ^a $P < 0.05$ and ^b $P < 0.01$ vs C/V group, ^c $P < 0.05$ and ^d $P < 0.01$ vs E/V group, ^e $P < 0.05$ and ^f $P < 0.01$ vs E/Zn group, ^g $P < 0.05$ and ^h $P < 0.01$ vs E/RFX group.



Supplementary Figure 2. Cell viability of Caco-2 treated by ethanol, zinc acetate or rifaximin. A: Time-dependent effects of 5% ethanol (EtOH) on cell viability in Caco-2 cells; B and C: Time-dependent effects of zinc acetate (1-100 μ M) (B) or rifaximin (0.1-10 μ M) (C) on cell viability in 5% EtOH-stimulated Caco-2 cells. The cells were cultured for 1, 2 and 3 h. Cell viability was indicated as ratio to the value at the start of experiment (0 h).

Supplementary Table 1. List of primers used in q-PCR.

Gene	Sense (5'-3')		Antisense (5'-3')	
	Mouse			
<i>Acta2</i>	CTGACAGAGGCACCACTGAA		CATCTCCAGAGTCCAGCACA	
<i>Tgfb1</i>	TTGCTTCAGCTCCACAGAGA		TGGTTGTAGAGGGCAAGGAC	
<i>Col1a1</i>	GAGCGGAGAGTACTGGATCG		GCTTCTTTTCCTTGGGGTTC	
<i>Mmp2</i>	GATACCCTCAAGAAGATGCAGAA GTT		ACATCTTGGCTTCCGCATG	
<i>Mmp9</i>	CCCATGTCACTTTCCCTTCAC		GCCGTCCTTATCGTAGTCAGC	
<i>Mmp13</i>	ACTTAACTTACAGGATTGTGAACT ATACTCCT		TGTCAGCAGTGCCATCATAGATT	
<i>Timp1</i>	CATGGAAAGCCTCTGTGGATATG		GATGTGCAAATTTCCGTTCCCTT	
<i>Cd68</i>	CTTCCCACAGGCAGCACAG		AATGATGAGAGGCAGCAAGAGG	
<i>Lbp</i>	GGCTGCTGAATCTCTTCCAC		GAGCGGTGATTCCGATTA AAA	
<i>Tlr4</i>	GGCAGCAGGTGGAATTGTAT		AGGCCCCAGAGTTTTGTTCT	
<i>Cd14</i>	GTCAGGA ACTCTGGCTTTGC		TGGCTTTTACCCACTGAACC	
<i>Tnfa</i>	ACGGCATGGATCTCAAAGAC		AGATAGCAAATCGGCTGACG	
<i>Il1b</i>	GCCCATCCTCTGTGACTCAT		AGGCCACAGGTATTTTGTCG	
<i>Nox1</i>	AAGCCATTGGATCACAACCTCAC		ATCCATGGCCTGTTGGCTTC	
<i>Nox2</i>	CCTTAGGCACTCAAGGCTGGTTC		CTTTGTCCCAGGGCAACAATTC	
<i>Nox4</i>	CCAGAATGAGGATCCCAGAA		ACCACCTGAAACATGCAACA	
<i>Zo1</i>	GCTAAGAGCACAGCAATGGA		GCATGTTCAACGTTATCCAT	
<i>Cldn1</i>	TCTACGAGGGACTGTGGATG		TCAGATTCAGCAAGGAGTGC	
<i>Cldn4</i>	TGGAACCCTTCCGTTGATTA		CACTGGGCTGCTTCTAGGTC	
<i>Ocln</i>	ACTGGGTCAGGGAATATCCA		TCAGCAGCAGCCATGTACTC	
<i>Mylk</i>	GCGTGATCAGCCTGTTCTTTCTAA		GCCCCATCTGCCCTTCTTTGACC	
<i>Gapdh</i>	CTGCGACTTCAACAGCAACT		GAGTTGGGATAGGGCCTCTC	
<i>Il6</i>	AGTCCGGAGAGGAGACTTCA		ATTTCCACGATTTCCAGAG	
<i>Nos2</i>	CCTTGTTACAGCTACGCCTTC		CTTCAGAGTCTGCCATTGC	
<i>Il10</i>	TGCACTACCAAAGCCACAAG		TCAGTAAGAGCAGGCAGCAT	
<i>Arg1</i>	GCAGTTGGAAGCATCTCTGG		GAGAAAGGACACAGGTTGCC	
<i>Cd163</i>	ATGGGTGGACACAGAATGGT		AGCTCACAGCCACAACAAAG	
	Human			
<i>ZO-1</i>	CAACATACAGTGACGTTT CACA		CACTATTGACGTTTCCCCACTC	
<i>OCN</i>	GCAAAGTGAATGACAAGCGG		CACAGGCGAAGTTAATGGAAG	
<i>MYCK</i>	AACGAGATCAACATCATGAACCA		CAGCTGTGCTTGCTCTCGAA	
<i>GAPDH</i>	CCAAGGAGTAAGACCCCTGG		TGGTTGAGCACAGGGTACTT	