

Table S1 Information of potential lipid biomarkers of serum samples in APC^{min/+} model

Compound ID	Compound	t _R	m/z	CON	MOD	Mirabilite
LMFA03060001	15(S)-HETE	7.03	319.228	7456423.80±1161624.96	9692761.4±01485045.52*	13184067.6±7274385.81##
LMFA01050455	2-Hydroxybutyric acid	1.49	103.04	34815.14±6908.52	57588.84±12965.67**	23034.73±18463.94##
LMST01030127	6-Deoxocastasterone	11.0 6	449.36	47312.56±28058.78	9074.97±7130.31*	17370.80±8382.51
LMPR01090036	9-cis retro-γ-retinal	7.03	285.221	377703.98±51049.37	496073.02±75288.82*	318297.60±392446.36##
LMSP02050012	CerP(d18:1/8:0)	8.59	506.36	247245.82±96590.73	475756.46±73994.74**	665285.26±34345.68##
LMP012409	Hypoxanthine	1.13	137.046	237277.44±169969.79	54983.30±32049.16*	71498.66±129807.70
LMFA07070050	L-Acetylcarnitine	0.84	204.123	1327409.80±133772.12	1917996.40±213318.15**	1252613.92±511906.67#
LMFA01030120	Linoleic acid	11	279.234	1746.51±758.23	819.93868±302.07*	1704.13924±1290.89
LMGP01050076	PC(0:0/18:0)	9.13	524.373	132528224±40986604.98	211109300±25782316.84**	229206475±9104743.24
LMGP01050121	PC(0:0/20:4)	7.33	544.338	2803617.80±947215.50	4002222.40±296092.63*	3961052.76±220672.05#
LMGP01050022	PC(16:1)	5.93	494.325	8810133.40±2502729.69	13126183.33±189186.68*	19817816±1109790.16##
LMGP01050026	PC(18:0/0:0)	9.13	524.373	132528224±40986604.99	225798143.51±19067716.54**	229206466.29±9104728.92
LMGP01050032	PC(18:1)	7.34	522.356	73398318±26983633.69	105965418±9536838.33*	103352427.43±10632854.05##
LMGP01050128	PC(18:3)	5.8	518.324	2153124.20±476753.08	2726491.80±265249.78*	2467117.33±164195.15
LMGP01050040	PC(18:4)	5.93	516.305	280823.24±94306.53	430853.92±49376.56*	723970.98±44943.83##
LMGP01050133	PC(20:3)	8.59	546.353	1017836.98±401249.00	1876566.40±303286.44**	1791347.25±832316.47##
LMGP01050050	PC(20:5)	7.02	542.327	4080.97±1600.65	6877.58±1405.04*	6564.88±748.379#

LMGP01080029	PC(7:0/O-8:0)	6.2	482.324	1364288.66±421351.734	2142809.50±251625.83*	2172928.50±464276.79##
LMGP01020004	PC(O-1:0/16:0)	7.89	510.356	3096038.20±1118112.98	5106387.60±505094.47**	7874841.20±497498.07##
LMGP01020028	PC(O-16:0/1:0)	7.47	510.355	594946.16±183986.35.	928482.60±75309.47**	1051229.36±50086.81##
LMGP01030009	PC(P-16:0/2:0)	7.34	522.356	73398320.16±26983634.99	105965428.87±9536854.48*	134756852.74±12133289.84##
LMGP02050001	PE(18:0/0:0)	5.97	482.324	186034.46±59927.34	266602.52±48481.70*	180262.43±62216.92##
LMGP02050012	PE(20:0/0:0)	7.24	510.355	123302.74±51469.09.	185932.14±28429.41*	160907.453682961±64168.86##
LMGP02050026	PE(21:0/0:0)	8.3	524.37	137107.94±49814.37	216182.54±30099.65*	142008.565791274±45977.29##
LMPR01090012	Retinyl acetate	7.21	329.247	3635708.80±479274.99.	60216.44±10941.13*	58428.09±9776.44##

“*”: CON vs MOD, p<0.05; “**”: CON vs MOD, p<0.01; “#”: Mirabilite vs MOD, p<0.05; “##”: Mirabilite vs MOD, p<0.01.

Table S2 Disordered pathways in serum samples of APC^{min/+} mice from control, model and mirabilite-treated group

Pathway	Total	Expected	Hits	Raw p	Holm adjust	FDR	Impact
Linoleic acid metabolism	6	0.02964	1	0.029328	1	1	1
Retinol metabolism	16	0.07904	1	0.076569	1	1	0.24551
Propanoate metabolism	20	0.0988	1	0.094906	1	1	0
Arachidonic acid metabolism	36	0.17784	1	0.16517	1	1	0
Biosynthesis of unsaturated fatty acids	42	0.20748	1	0.19028	1	1	0
Purine metabolism	68	0.33592	1	0.29178	1	1	0.01064