

Table S1. Multiple linear regression model. mRNA gene expression of monocytes following propionate treatment.

Dependent Variable.	Independent Variable	Model				
		Coefficient	p	R <sup>2</sup>	Adjusted R <sup>2</sup>	p
<b>TNF-<math>\alpha</math></b> F (2,20)	FFAR3	0.256	0.094			
	HDAC2	0.863	0.015	0.41	0.35	0.005
<b>IL-6</b> F (2,20)	FFAR2	0.37	0.022			
	FFAR3	0.31	0.027	0.37	0.30	0.013
<b>NFKB1</b> F (2,20)	HDAC1	0.494	<0.001			
	HDAC2	0.307	0.254			
	HDAC9	0.382	0.004	0.83	0.80	<0.001
<b>RELA</b> F (2,20)	HDAC1	0.637	<0.001			
	HDAC2	0.301	0.182			
	HDAC9	0.339	0.003	0.90	0.88	<0.001
<b>MAPK1</b> F (2,20)	HDAC1	0.041	0.611			
	HDAC2	0.801	0.004			
	HDAC9	0.091	0.450	0.58	0.51	<0.001

TNF- $\alpha$ ; tumour necrosis factor- $\alpha$ . IL-6; interleukin 6. <sup>1</sup> TNF- $\alpha$  measured in supernatant of LPS-stimulated monocytes. <sup>2</sup>mRNA gene expression measured in 2<sup>-ΔCT</sup>.

Table S2. Multiple linear regression model. mRNA gene expression of monocytes following butyrate treatment.

Independent Variable	Model				
	Coefficient	p	R <sup>2</sup>	Adjusted R <sup>2</sup>	p
<b>NFKB1</b> F (2,20)	FFAR2	0.625	0.020		
	FFAR3	-0.206	0.334	0.24	0.17
<b>NFKB1</b> F (2,20)	HDAC1	0.567	<0.001		
	HDAC2	0.313	0.098		
<b>RELA</b> F (2,20)	HDAC9	0.097	0.456	0.82	0.79
	HDAC1	0.557	<0.001		
<b>MAPK1</b> F (2,20)	HDAC2	0.309	0.033		
	HDAC9	0.171	0.090	0.89	0.87
<b>MAPK1</b> F (2,20)	HDAC1	0.074	0.243		
	HDAC2	0.694	<0.001		
	HDAC9	0.242	0.006	0.87	0.85

<sup>1</sup>mRNA gene expression measured in 2<sup>-ΔCT</sup>.