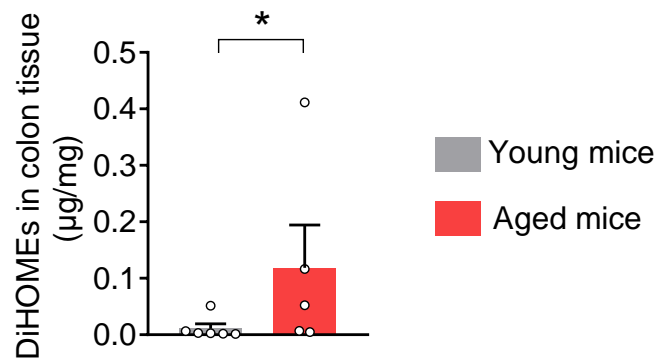
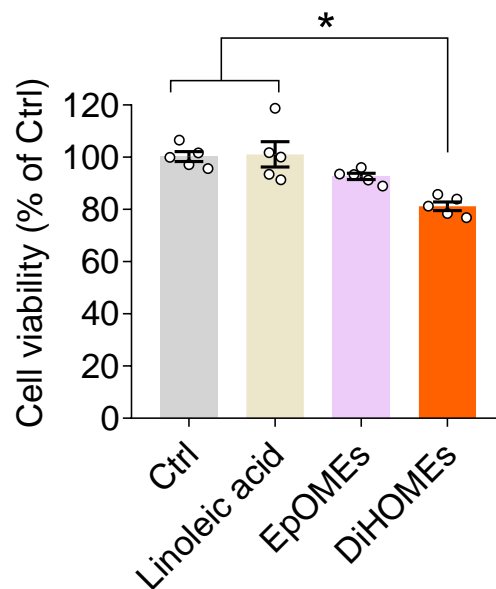


## Supplementary Materials



**Figure S1. The levels of DiHOMEs in the colon of young or aged mice.** The results are expressed as mean  $\pm$  SEM.  $n = 5-6$  mice per group. The statistical significance of the two groups was determined using Wilcoxon–Mann–Whitney test. \*  $P < 0.05$



**Figure S2. DiHOMes, not linoleic acid nor EpOMes, reduce cell viability in human colonic CCD-18co cells.** The CCD-18co cells were treated with methyl esters of linoleic acid, EpOMes, or DiHOMes at 10  $\mu$ M for 24 hours. The methyl esters were used to encourage rapid penetration of cells where the esters are rapidly hydrolyzed to the free acid anions. The results are expressed as mean  $\pm$  SEM. Statistical significance of three groups was determined using one-way ANOVA. \*  $P < 0.05$ .

**Table S1. Sequences of primers in qRT-PCR**

<b>Mouse primer information</b>			
<b>Gene</b>	<b>Forward primer</b>	<b>Reverse primer</b>	<b>Product length</b>
<i>Gapdh</i>	AGGTCGGTGTGAACGGATTTG (T <sub>m</sub> = 62.6°C)	TGTAGACCATGTAGTTGAGGTCA (T <sub>m</sub> = 62.6°C)	95 bp
<i>Ephx2</i>	GCGTTCGACCTTGACGGAG (T <sub>m</sub> = 63.0°C)	TGTAGCTTTCATCCATGAGTGGT (T <sub>m</sub> = 61.3°C)	196 bp
<i>p21</i>	CCTGGTGATGTCCGACCTG (T <sub>m</sub> = 61.7°C)	CCATGAGCGCATCGCAATC (T <sub>m</sub> = 62.0°C)	103 bp
<i>p16</i>	CGCAGGTTCTTGGTCACTGT (T <sub>m</sub> = 62.4°C)	TGTTACAGAAAGCCAGAGCG (T <sub>m</sub> = 63.0°C)	127 bp
<i>Tp53</i>	CTCTCCCCCGCAAAAGAAAAA (T <sub>m</sub> = 60.8°C)	CGGAACATCTCGAAGCGTTTA (T <sub>m</sub> = 60.4°C)	84 bp
<i>β-galactosidase</i>	GCACGGCATCTATAATGTCACC (T <sub>m</sub> = 61.1°C)	GTATCGGAATGGCTGTCCATC (T <sub>m</sub> = 60.3°C)	88 bp
<i>Perk</i>	AGTCCCTGCTCGAATCTTCCT (T <sub>m</sub> = 62.4°C)	TCCCAAGGCAGAACAGATATACC (T <sub>m</sub> = 61.2°C)	125 bp
<i>Ire1</i>	ACACCGACCACCGTATCTCA (T <sub>m</sub> = 62.5°C)	TCCAACATTTGTCACTTGCTCT (T <sub>m</sub> = 60.4°C)	110 bp
<i>Chop</i>	GTCCCTAGCTTGGCTGACAGA (T <sub>m</sub> = 61.5°C)	TGGAGAGCGAGGGCTTTG (T <sub>m</sub> = 59.3°C)	73 bp
<i>Gadd34</i>	GAGGGACGCCACAACCTTC (T <sub>m</sub> = 62.6°C)	TTACCAGAGACAGGGGTAGGT (T <sub>m</sub> = 61.5°C)	182 bp
<b>Human primer information</b>			
<i>GAPDH</i>	ACAACTTTGGTATCGTGGAAGG (T <sub>m</sub> = 60.2°C)	GCCATCACGCCACAGTTTC (T <sub>m</sub> = 61.7°C)	101 bp
<i>CHOP</i>	GGAAACAGAGTGGTCATTCCC (T <sub>m</sub> = 60.3°C)	CTGCTTGAGCCGTTCAATTCTC (T <sub>m</sub> = 61.3°C)	116 bp
<i>GADD34</i>	ATGATGGCATGTATGGTGAGC (T <sub>m</sub> = 60.2°C)	AACCTTGCAGTGTCCTTATCAG (T <sub>m</sub> = 60.0°C)	120 bp