

Ethanolamine plasmalogen suppresses apoptosis in human intestinal tract cells *in vitro* by attenuating induced inflammatory stress

Ephantus Nguma¹, Shinji Yamashita^{1*}, Kei Kumagai², Yurika Otoki², Ayaka Yamamoto³, Takahiro Eitsuka², Kiyotaka Nakagawa², Teruo Miyazawa⁴, Mikio Kinoshita¹

¹Department of Life and Food Sciences, Obihiro University of Agriculture and Veterinary Medicine, Obihiro, 080-8555, Japan

²Food and Biodynamic Chemistry Laboratory, Graduate School of Agricultural Science, Tohoku University, Sendai, 980-8572, Japan

³Yaizu Suisankagaku Industry Co., Ltd., Shizuoka, 425-8570, Japan

⁴Food and Biotechnology Platform Promoting Project, New Industry Creation Hatchery Center (NICHe), Tohoku University, Sendai, 980-8579, Japan

***Corresponding author:** Shinji Yamashita, Department of Life and Food Sciences, Obihiro University of Agriculture and Veterinary Medicine, West 2-11, Inada, Obihiro, Hokkaido 080-8555, Japan; **Tel:** +81-155-49-5446; **Fax:** +81-155-49-5593; **Email:** syamashita@obihiro.ac.jp

Supporting information

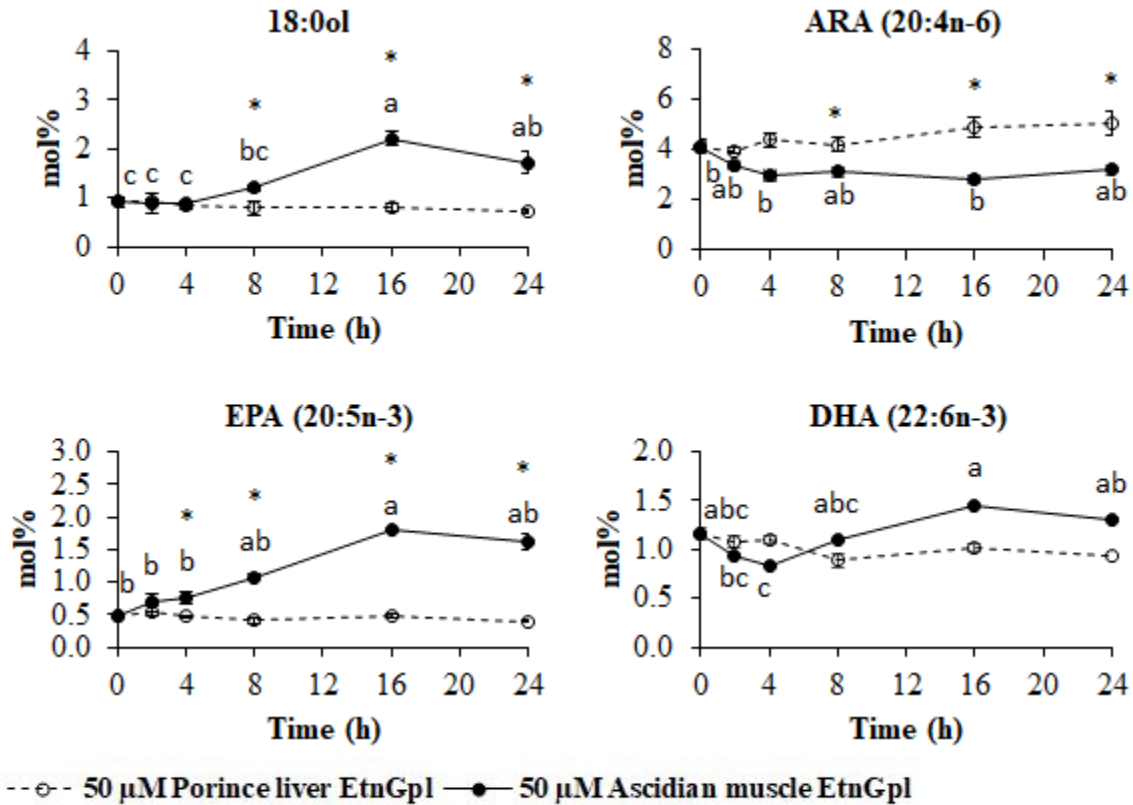


Figure S1 Time-dependent changes of phospholipid carbon chain composition in differentiated Caco-2 cells after treatment with 50 μM porcine liver and ascidian muscle EtnGpl. Values represent means ± SEM, $n = 3$. Different letters indicate significant differences at $P < 0.05$ among cells treated with the same EtnGpl, determined by ANOVA (Tukey's test). Asterisks indicate significantly higher levels at a given time-point ($P < 0.05$, t-test).

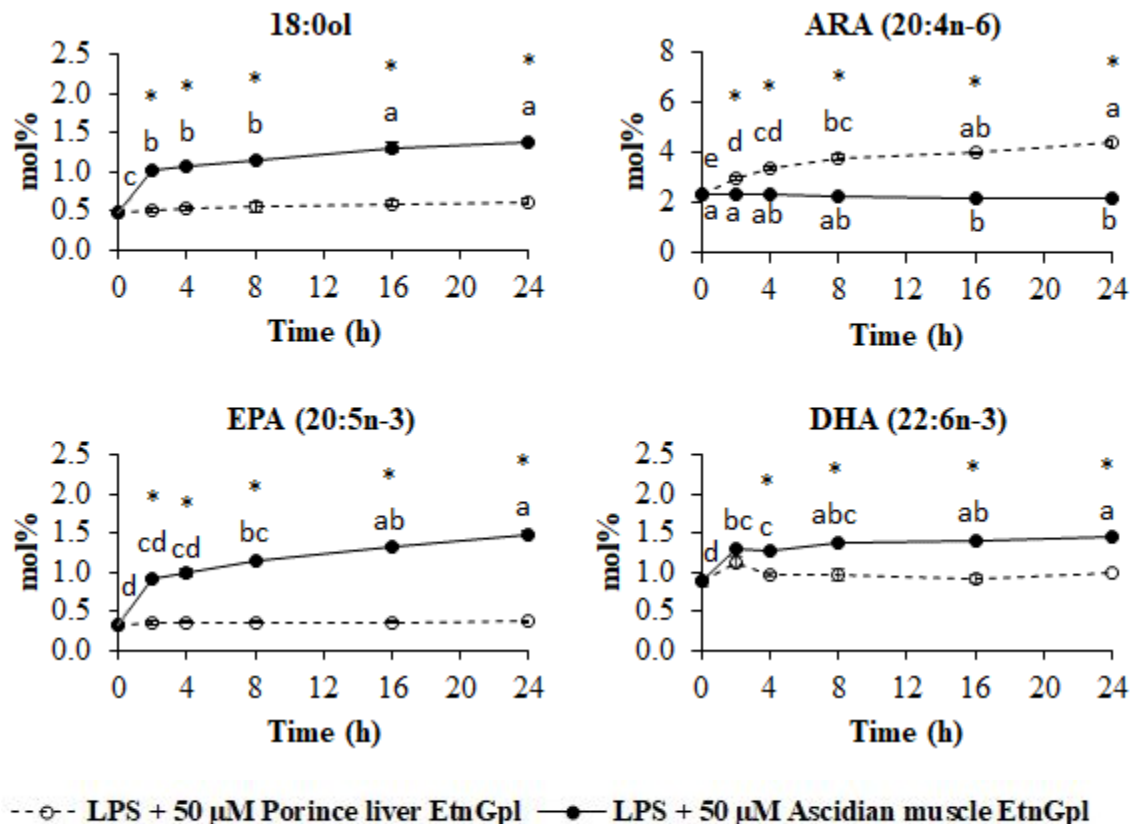


Figure S2 Time-dependent changes of phospholipid carbon chain composition in differentiated Caco-2 cells after treatment with LPS + 50 μM porcine liver and ascidian muscle EtnGpl. Values represent means ± SEM, $n = 3$. Different letters indicate significant differences at $P < 0.05$ among cells treated with the same EtnGpl, determined by ANOVA (Tukey's test). Asterisks indicate significantly higher levels at a given time-point ($P < 0.05$, t-test).