

A Chlorophyll Derived Phylloxanthobilin is a Potent Antioxidant that modulates Immunometabolism in Human PBMC

Cornelia A. Karg ¹, Lucia Parrakova ², Dietmar Fuchs ³, Harald Schennach⁴, Bernhard Kräutler⁵, Simone Moser ^{1,*} and Johanna M. Gostner ^{2,*}

¹ Department of Pharmaceutical Biology, Ludwigs-Maximilian University of Munich, Butenandtstr. 5-13, 81977 Munich, Germany

² Institute of Medical Biochemistry, Medical University of Innsbruck, Innrain 80, 6020 Innsbruck, Austria

³ Institute of Biological Chemistry, Medical University of Innsbruck, Innrain 80, 6020 Innsbruck, Austria

⁴ Central Institute of Blood Transfusion and Immunology, University Hospital, Anichstr. 35, 6020 Innsbruck, Austria

⁵ Institute of Organic Chemistry and Center for Molecular Biosciences, University of Innsbruck, Innrain 80/82, 6020 Innsbruck, Austria

* Correspondence: simone.moser@cup.uni-muenchen.de (S.M.); johanna.gostner@i-med.ac.at (J.M.G.); Tel.: +49-89-2180-77175 (S.M.); +43-512-9003-70120 (J.M.G.)

Supplementary Information

Table of content

Supplementary Figures

1. Figure S1	HPLC traces of PxB treated Caco-2 cells	2
2. Table S1	Test concentrations and netAUC in the ORAC assay.....	2

Supplementary Figures

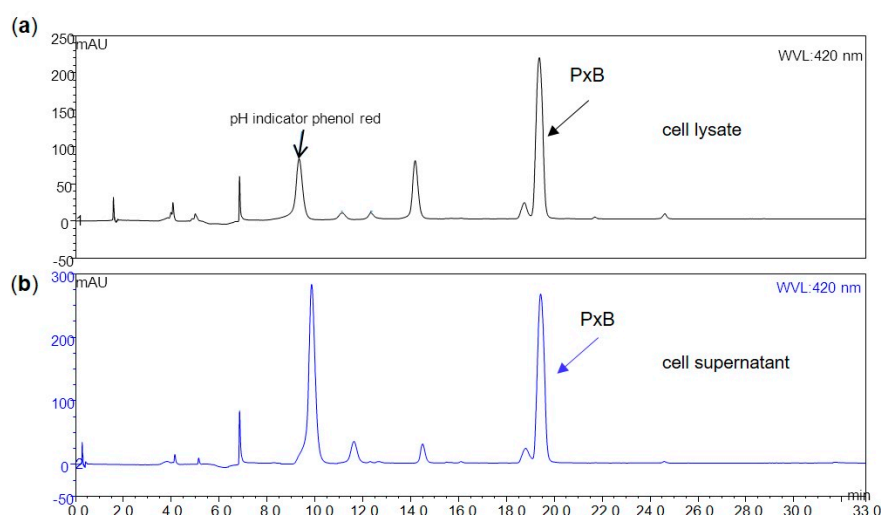


Figure S1. HPLC traces (detected at 420 nm) of PxB treated Caco-2 cells; (a) cell supernatant and (b) cell lysate were analysed (Gradient 17-45 % ACN in 20 min, 10 mM NH₄OAc buffer, 500 µl/min).

sample	µmol TE/µmol compound	+/- SEM	concentration range measured [µM]	slope	intercept	R ²
Trolox (Vit E)	1.00		0.78 - 6.25	3.5012	1.0977	0.9960
PleB	2.23	0.13	0.30 - 2.39	7.0909	1.7436	0.9784
PxB	4.67	0.32	0.19 - 1.54	11.7790	3.6418	0.9607
DPIeB	3.83	0.19	0.24 - 1.95	9.1142	4.1643	0.9444
EGCG	5.36	0.18	0.17 - 0.68	18.6660	2.0802	0.9870
Vit C	0.64	0.07	0.44 - 3.55	0.4938	0.3189	0.9861

Table S1. Test compound concentrations and netAUC in the ORAC assay: A dose-dependent increase of the fluorescein rescue from oxidative decay in the the oxygen radical absorbance capacity assay (ORAC) is indicated by a linear increase of the netAUC (AUC = area under curve; netAUC = AUC_{sample} – AUC_{blank}), as shown by the slope and intercept of the straight line, and the regression coefficient (R²). The final concentration range of the test compounds in the assay mixture is listed. Results shown are derived from four independent measurements.