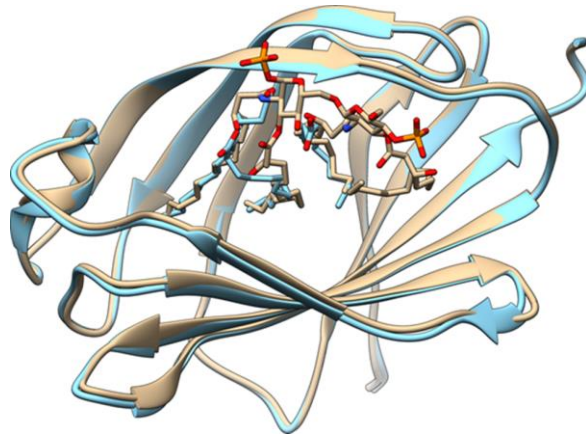


-Supplementary Materials

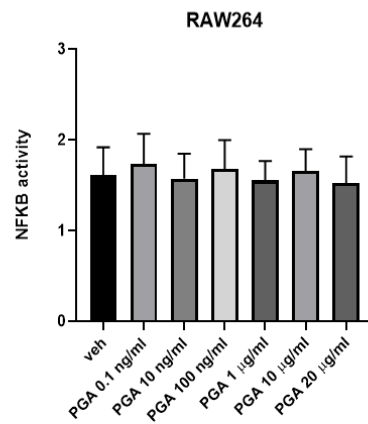


**Figure S1.** X-ray structures of MD-2 in complex with lipid IVa (PDB id: 2E59), colored in tan, and myristic acid (PDB id: 2E56), colored in sky blue, after best fit at protein backbone level. Oxygen and nitrogen atoms are colored in red and blue, respectively. Ligands are shown in stick representation.

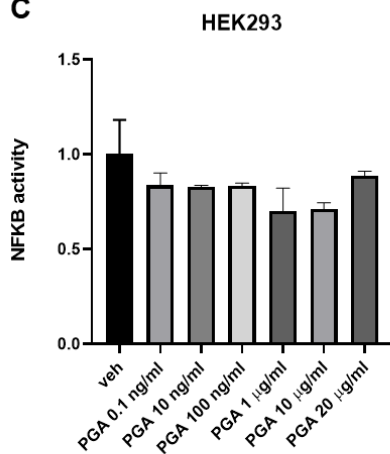
**A**

Gene name	RAW264	HEK293	HELA
TLR4	24.54±0.05	N.D.	29.63±0.02
S16	16.73±0.05	17.72±0.03	16.95±0.07

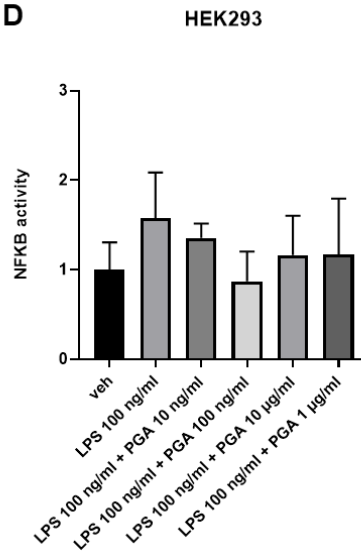
**B**



**C**

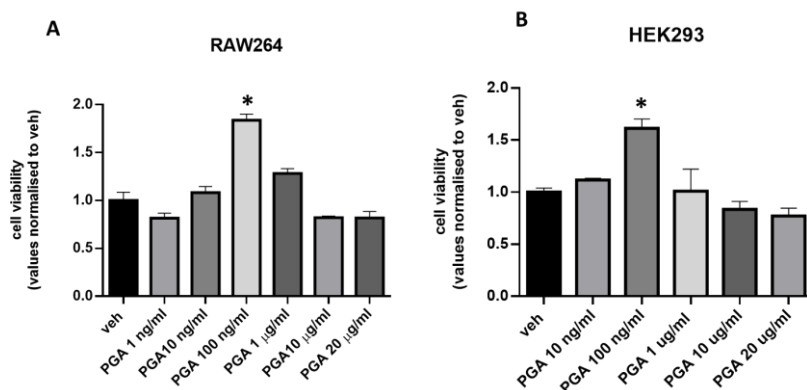


**D**

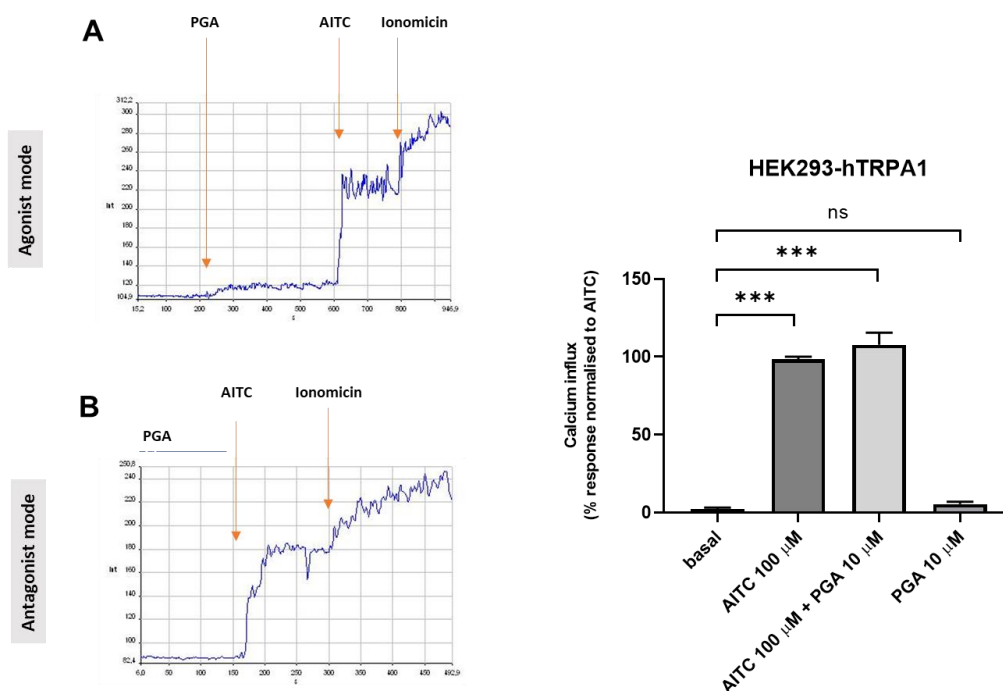


**Figure S2.** TLR4 expression measurement and luciferase assays performed in non-transfected RAW264 and HEK293 cells. (A) The table shows the cycle threshold (Ct) value (mean of 4 independent experiments ± SEM) of TLR4 measured in RAW264 and HEK293 cells. HeLa cells served as a control for the human TLR4 primer sequences. N.D. = signal not detected (B) Luciferase activity measured in

relative light units (RLU) normalized to the vehicle group was measured in non-transfected RAW264; Luciferase activity measured in relative light units (RLU) normalized to the vehicle group was measured in non-transfected (C) and TLR4 transfected (D) HEK293 cells stimulated with the indicated concentrations of PGA.



**Figure S2.** Cell viability was assessed using the MTT assay in RAW264 (A) and HEK293 (B) cells. Values are mean  $\pm$  SEM;  $n = 4$ ; The asterisk denotes a \*  $p < 0.05$  versus veh group; one-way ANOVA with Tukey's test was used to assess significance.



**Figure S4.** Effect of PGA in TRPA1-transfected HEK293 cells. (A,B) Representative traces showing the effect of PGA 10  $\mu$ M, Allyl isothiocyanate (AITC) 100  $\mu$ M and Ionomycin 4  $\mu$ M in human embryonic kidney 293 (HEK293) cells stably transfected with rat TRPA1. (C) Bar Graph showing quantification of results. Values are mean  $\pm$  SEM of three independent determinations; \*\*\* denotes a  $p \leq 0.01$ ; one-way ANOVA with Tukey's test was used to assess significance. Data are expressed as % relative to AITC 100  $\mu$ M. ns: not significant.