

Omega-3 and omega-6 DPA inhibits Ca²⁺-sensitization of vascular smooth muscle contraction induced by sphingosylphosphorylcholine via inhibiting Rho-kinase activation and translocation

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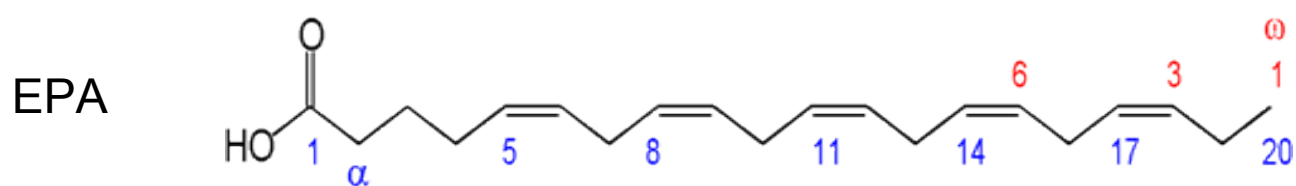
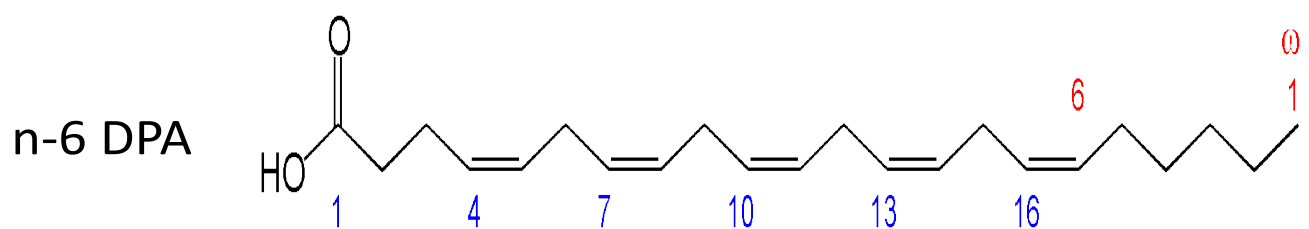
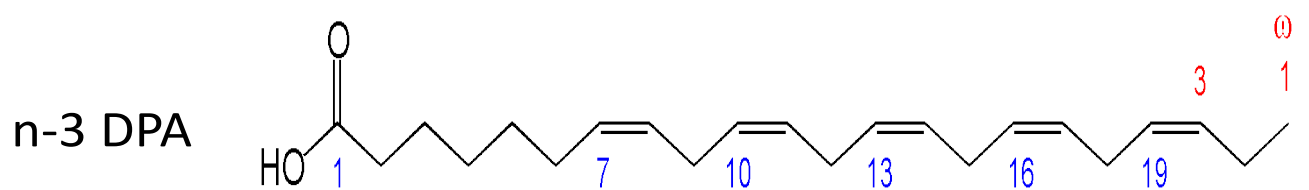
Supplementary Video S1 Time-lapse video of SPC-induced contraction of vascular smooth muscle cells. Images were acquired at 30 second intervals for 30 min.

Supplementary Video S2 Time-lapse video of SPC-induced contraction of vascular smooth muscle cells pretreated with n-3 DPA (60 μ M) for 30 min. Images were acquired at 30 second intervals for 30 min.

Supplementary Video S3 Time-lapse video of SPC-induced contraction of vascular smooth muscle cells pretreated with n-6 DPA (60 μ M) for 30 min. Images were acquired at 30 second intervals for 30 min.

Supplementary Fig.S1

The chemical structures of n-3 DPA , n-6 DPA and EPA.

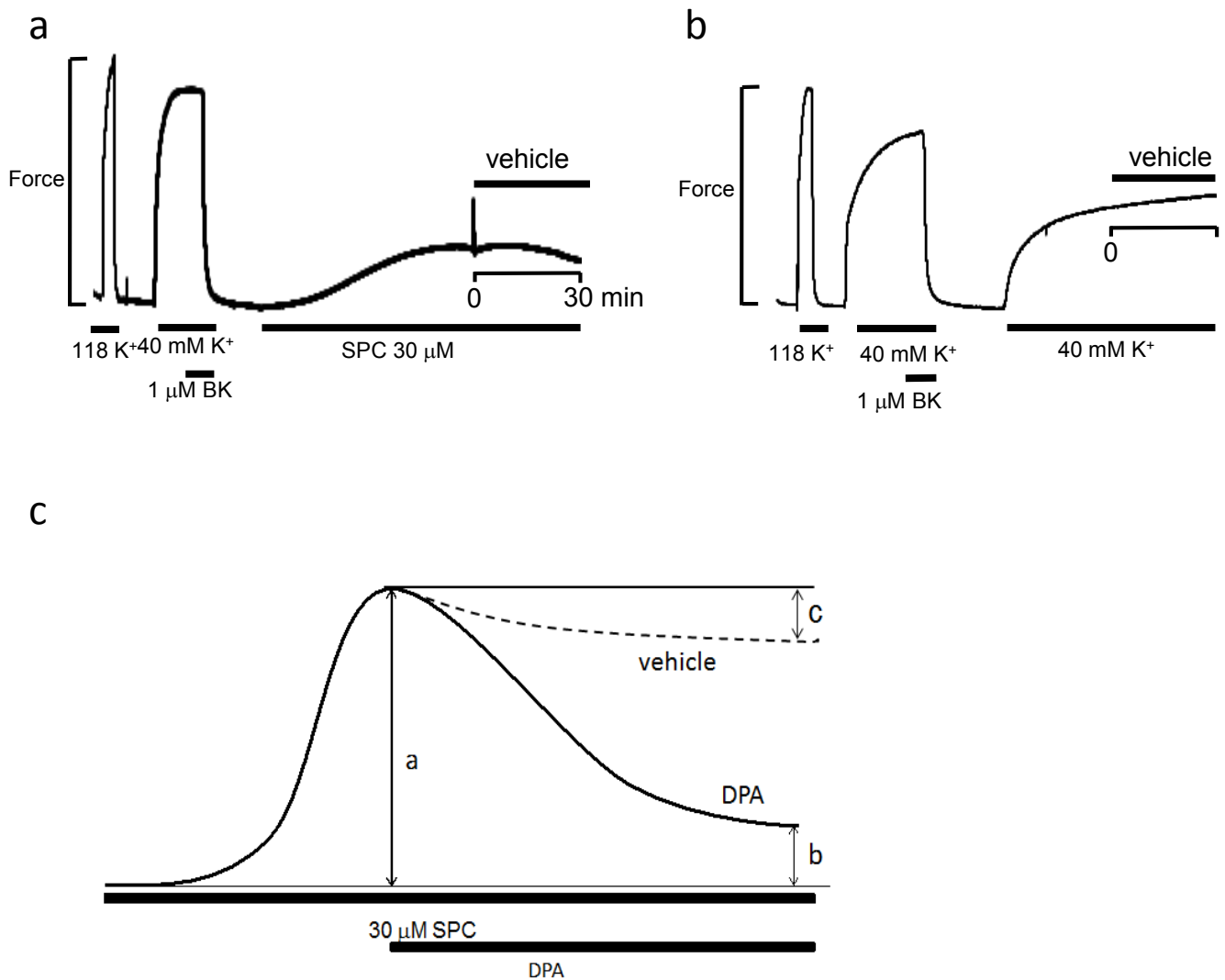


Supplementary Fig.S2

a SPC-induced contraction in the presence of vehicle.

b 40 mM K⁺-induced contraction in the presence of vehicle.

c The inhibitory extent of contraction induced by n-3 DPA or n-6 DPA was calculated by a percentage of the response to the contraction induced by 30 μM SPC.



a: The contraction of VSM induced by SPC.

b: The contraction of VSM in the presence of DPA.

c: The contraction of VSM in the presence of vehicle.

Inhibitory ratio of DPA (%) = $(a-b-c)/a \times 100\%$.

Supplementary Fig.S3

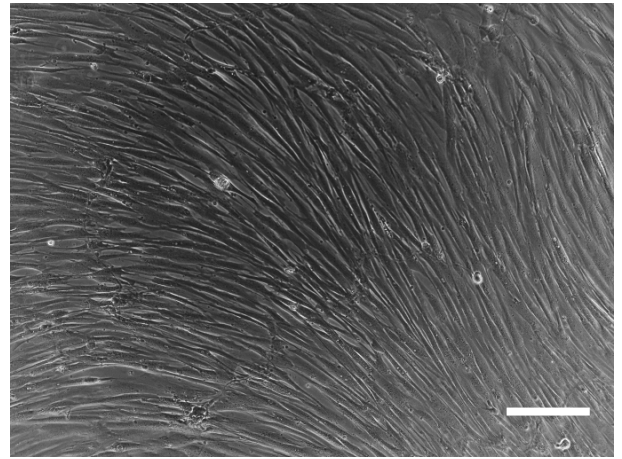
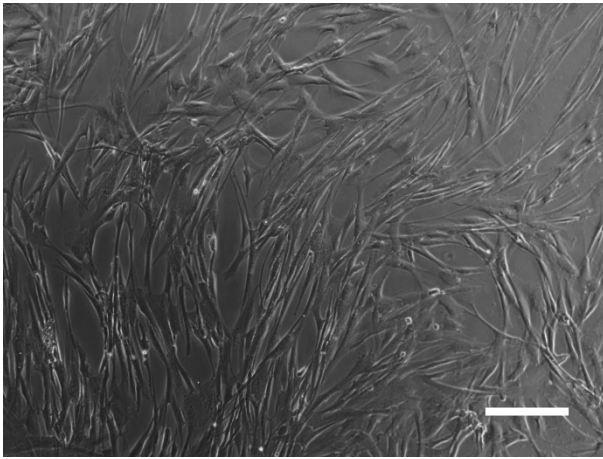
Induction of contractile type of human CASMCs after serum-free medium treatment for 2 days. Scale bar =200 μm .

a Phase-contrast micrograph of human CASMCs in normal medium.

b Phase-contrast micrograph of human CASMCs in serum-free medium for 2 days.

a

b



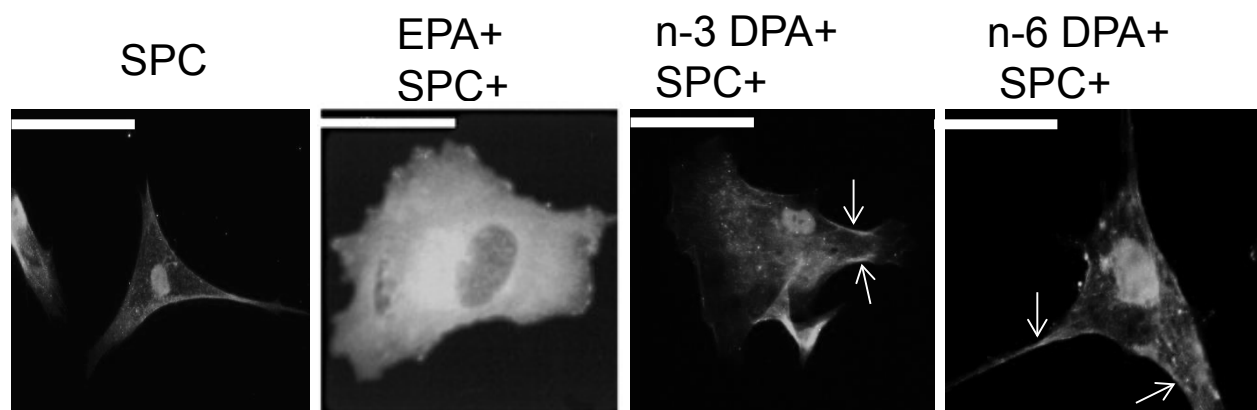
Supplementary Fig.S4

- a Control image of immunofluorescent staining in the presence of second antibody. Scale bar = 10 μm .
- b Translocation of Fyn induced by SPC in the presence of EPA and DPA. Scale bar = 100 μm .

a



b



As a reference, the picture (EPA+ SPC+) obtained from our previous publication (Ref. 27) is shown.