

## Expanded View Figures

	patient #2	patient #3	patient #4	patient #6	patient #7	patient #8	patient #9	patient #10	patient #11	patient #12	patient #13
<b>Sex</b>	male	female	female	male	female	male	male	male	female	male	female
<b>Age</b>	89	78	88	46	53	57	65	51	72	ND	64
<b>Reason for hospitalization</b>	Knee arthritis related to a flare of chondrocalcinosis	Treatment of rheumatoid arthritis	Knee arthritis related to a flare of chondrocalcinosis	Treatment of rheumatoid arthritis	Treatment of rheumatoid arthritis	ankylosing spondylitis	knee osteoarthritis	knee osteoarthritis	Treatment of rheumatoid arthritis	psoriatic arthritis	Treatment of rheumatoid arthritis
<b>VAS (/10)</b>	8	7	4	1	3	4	0	5	9	6	9
<b>Plasmatic C-reactive protein (mg/l)</b>	94	5	ND	1,1	ND	1	1	ND	ND	47	0.48
<b>Protein in synovial fluid (g/l)</b>	34	ND	ND	ND	52,6	27,3	ND	36,6	31	ND	30
<b>pH of synovial fluid</b>	7.45 ± 0.02	7,68	7,75	7,66	7,77	7,72	7,85	7,76	7,61	7,63	7.49 ± 0.01
<b>Estimated LPC concentration (µM)</b>											
<b>LPC 16:0</b>	38	65	93	165	161	169	124	135	128	104	56
<b>LPC 18:1</b>	12	16	20	66	40	40	40	34	43	30	21
<b>LPC 18:0</b>	16	28	34	67	75	65	55	61	51	44	22
<b>LPC 20:4</b>	6	12	9	13	16	16	19	20	21	13	8

Figure EV1. Detailed analysis of exudates from 11 patients.

ND, not determined.

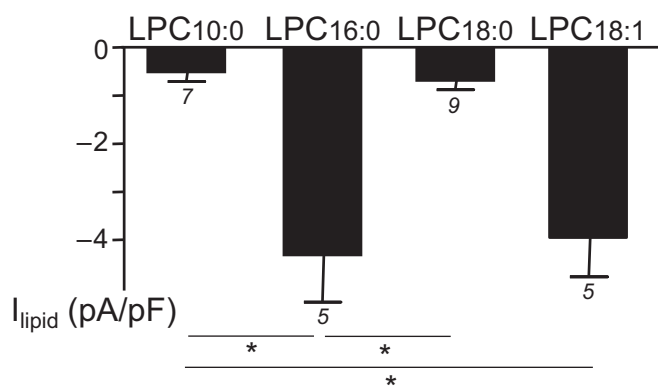
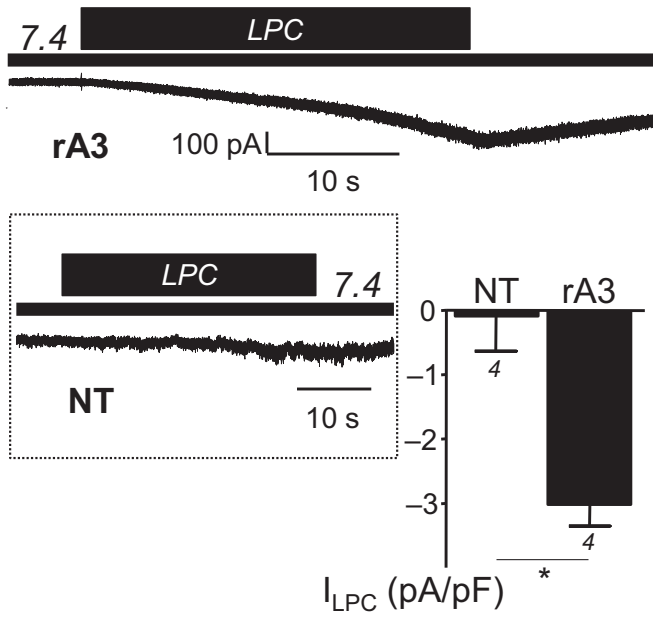


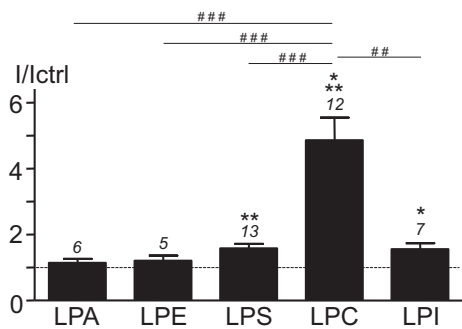
Figure EV2. Effects of LPC molecules containing different fatty acid chains on ASIC3-transfected cells at resting pH 7.4.

Current densities are measured at  $-80$  mV from F-11 cells following 30-s applications of LPC10:0, LPC16:0, LPC18:0, or LPC18:1 at  $10$   $\mu$ M ( $*P < 0.05$  Kruskal–Wallis test followed by a Dunn's *post hoc* test). The number of experiments ( $n$ ) is indicated below each bar graph, and error bars indicate  $\pm$  SEM.



**Figure EV3. Activating effect of LPC on ASIC3 channels expressed in CHO cells.**

Rat ASIC3 (rA3) currents are generated by extracellular application of LPC (crude extract from bovine brain, 10  $\mu$ M) at resting pH 7.4. Current densities are measured at  $-80$  mV and are compared to the currents induced in non-transfected (NT) cells ( $*P < 0.05$ , Mann-Whitney  $U$ -test). The number of experiments ( $n$ ) is indicated below each bar graph, and error bars indicate  $\pm$  SEM.



**Figure EV4. Effects of different lysophospholipids on acid-induced ASIC3 current.**

Comparison of the effects of LPA, LPE, LPS, LPC, and LPI at 10  $\mu$ M on the pH 7.0-induced current recorded from F-11 cells (each compound is applied for 3 min,  $*P < 0.05$ , and  $**P < 0.01$  and  $***P < 0.001$ , Wilcoxon test;  $##P < 0.01$  and  $###P < 0.001$ , Kruskal-Wallis test followed by a Dunn's *post hoc* test). The number of experiments ( $n$ ) is indicated above each bar graph, and error bars indicate  $\pm$  SEM.