SUPPLEMENTARY FIGURES

ASIC2a-dependent increase of ASIC3 surface expression enhances the sustained component of the currents

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Fig. S1. N- or C-terminal deletion or both N- and C-terminal deletion from ASIC3 does not rescue ASIC3 from ER accumulation. (A) Confocal images of HEK293T cells expressing GFP-tagged ASIC3(ΔN), ASIC3(ΔC), or ASIC3(ΔN,C) with an ER marker (mCh-Cb5). For N- or C-terminal deletion, 2-43 amino acids or 473-530 amino acids were deleted, respectively. Scale bars are 5 μm. (B) Overlap coefficient value of fluorescent signals (mean ± SEM). Overlap coefficient value between wild-type (WT) ASIC3 and Cb5 in Fig. 1C was plotted as a control (light blue). The number on each bar represents n for each condition.
**Fig. S2.** N- and C-terminal regions of ASIC3 are involved in heteromeric assembly with ASIC2a.

(A) Confocal images of HEK293T cells expressing GFP-tagged ASIC3(ΔN), ASIC3(ΔC), or ASIC3(ΔN,C) with ASIC2a. Scale bars are 5 μm. (B) Overlap coefficient value of fluorescent signals (mean ± SEM, *P < 0.05; **P < 0.01; ***P < 0.001, with one-way ANOVA followed by Bonferroni post-hoc test). Overlap coefficient value between wild-type (WT) ASIC3 and ASIC2a in Fig. 2B was plotted as a control (light blue). The number on each bar represents n for each condition.
**Fig. S3.** N-terminal 15-30 amino acids of ASIC2a are critical for membrane targeting of ASIC2a and ASIC2a-dependent surface trafficking of ASIC3. (A) ASIC3 was co-expressed with ASIC2a or ASIC2b. ASIC2b has different amino acid sequences in the N-terminus, the first transmembrane domain, and one third of extracellular loop. (B) Confocal images of HEK293T cells expressing GFP-tagged ASIC3 in the presence of ASIC2a or ASIC2b. (C) Schematic diagram of N-terminal deletion of ASIC2a. Confocal images of HEK293T cells expressing GFP-tagged ASIC3 in the presence of ASIC2a(Δ14), ASIC2a(Δ30), or ASIC2a(Δ37). Scale bars are 5 μm.