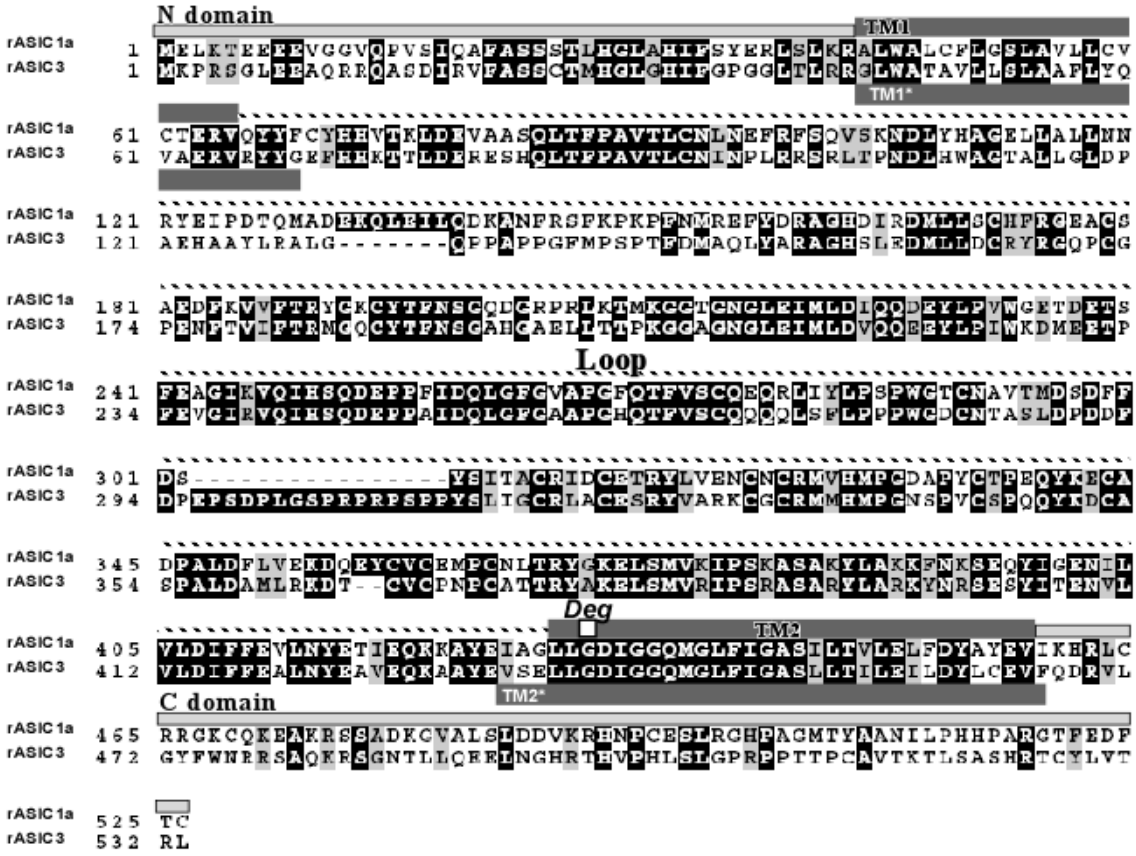
Supplemental data

Supplementary Figure 1. *Alignment of the amino acid sequences of rat ASIC1a and rat ASIC3 illustrating the different domains used to build the chimeras*

Identical or similar residues are printed white on black or black on gray background, respectively. The transmembrane domains are indicated by dark-grey rectangles. TM1 and TM2 indicate the regions used in our study to construct the chimeras, which are slightly smaller than the two transmembrane domains determined from the tridimensional structure of the chicken ASIC1 channel (TM1* and TM2*). The loop domain is comprised between TM1 and TM2. The cytosolic amino- and carboxy-terminal domains that have been swapped between ASIC1a and ASIC3 are indicated by light-grey rectangles. The Deg position is indicated above the sequence.

Supplementary Figure 2. *pH-dependent activation and inactivation curves of the transient current of ASIC3 and ASIC3-related chimeras.*

A and **B**, pH-dependent activation and inactivation curves of the transient current of ASIC3 and the ASIC3(C)1a chimera. The activation curves have been obtained by decreasing the pH from 7.6 to the indicated values (7.4/7.2/7.0/6.8/6.6/6.4/6.0/5.6/5.0) and the data have been normalized to pH 5.0. The inactivation curves have been obtained by shifting the pH from the indicated values (7.4/7.3/7.2/7.1/7.0/6.9/6.8/5.0) to pH 7.6 and the data have been normalized to pH 7.6. The $pH_{0.5}$ for activation of ASIC3 and ASIC3(C)1a are 6.17±0.04 and 6.17±0.02 , n=3 and 6, respectively, and the $pH_{0.5}$ for inactivation are 7.24±0.01 and 7.15±0.01 , n=4 and 4, respectively. **C** and **D**, pH-dependent activation and inactivation curves of the transient current of the ASIC3(TM1C)1a chimera established with the protocol previously described in A and B. Curves of the ASIC3(C)1a chimera have been added to allow comparison. The $pH_{0.5}$ for activation of ASIC3(TM1C)1a is 5.94±0.02, n=5, and the $pH_{0.5}$ for inactivation is 7.17±0.01, n=5.



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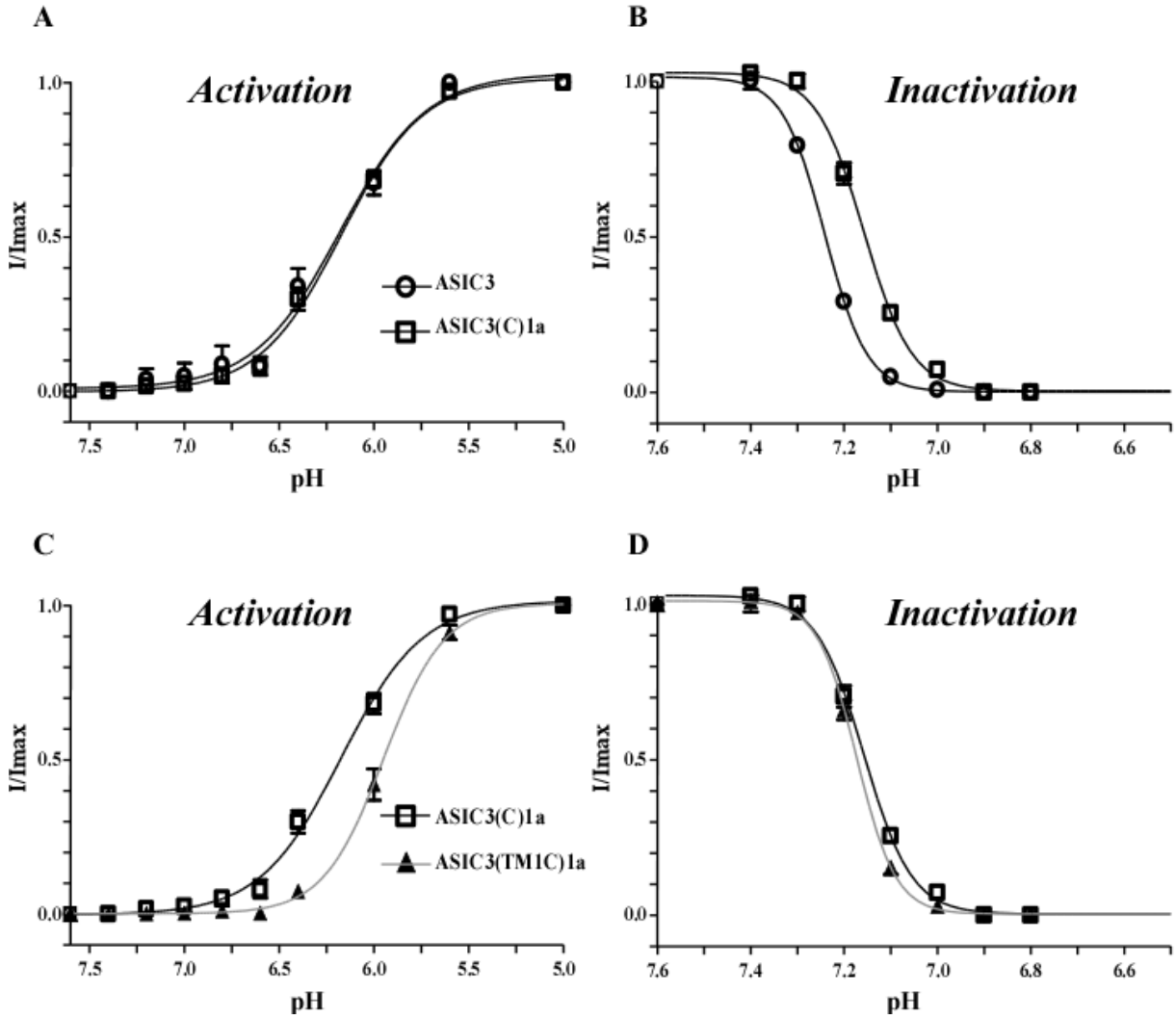
Alignment of the amino acid sequences of rat ASIC1a and rat ASIC3 illustrating the different domains used to build the chimeras



Supplementary Figure 2.

pH-dependent activation and inactivation curves of the transient current of ASIC3 and ASIC3-related chimeras.