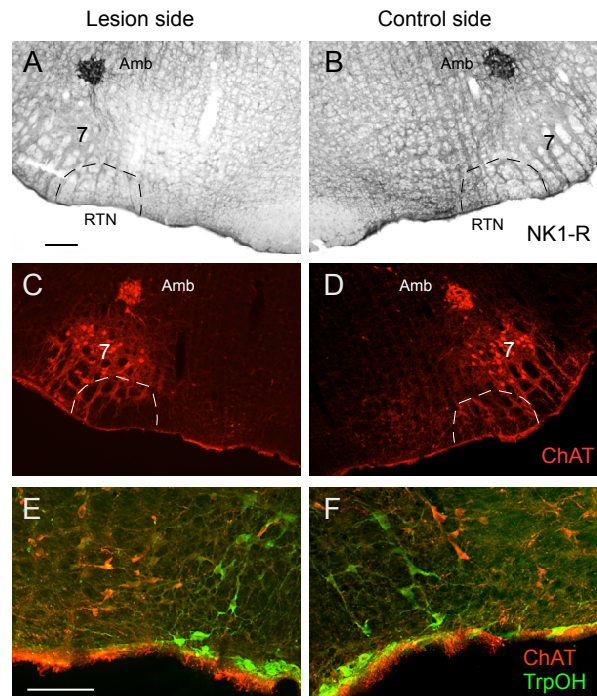


Supplemental Figure 1: Segmentation of NK1R immunoreactivity

A. Brightfield micrograph of section through the RTN on the toxin injected side. B. Same section as A with the NK1R immunoreactivity shown in red as adjusted for segments containing immunoreactivity. C. Brightfield micrograph of section through the RTN on the control side (from the same section as in A). D. Same section as C with the NK1R immunoreactivity shown in red as adjusted for segments containing immunoreactivity. Note the identical segmentation for the nucleus ambiguus (Amb) in panels B and D. Calibration bar in A (200  $\mu\text{m}$ ) applies to all panels.



Supplemental Figure 2: Selectivity of the lesions induced by SSP-SAP

A,B: NK1R immunoreactivity at RTN level 15 days after a unilateral injection of 0.6 ng SSP-SAP (toxin side in A, control side in B). C and D: adjacent section depicting immunoreactivity for choline acetyl-transferase, ChAT. Note that facial and ambigular motoneurons seem unaffected by the toxin. E and F: higher power photograph of the parapyramidal region showing that the cholinergic and the serotonergic neurons located medial to the toxin-induced lesion are preserved. Calibration bar in A is 200  $\mu\text{m}$  and applies to panels A and B. Calibration bar in E is 100  $\mu\text{m}$  and applies to panels C-F.