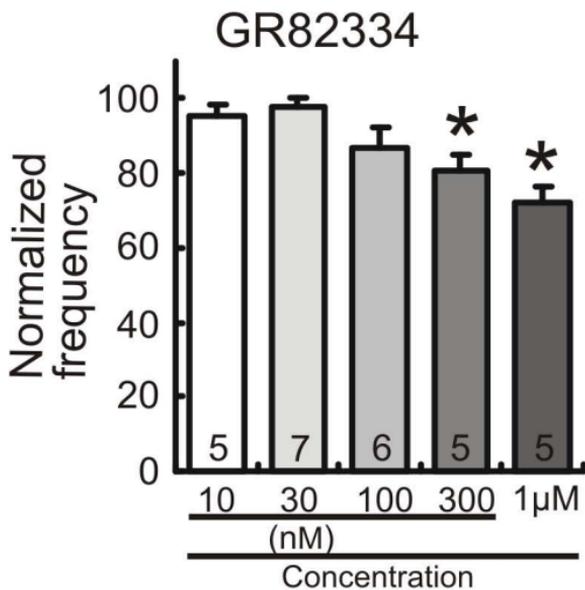
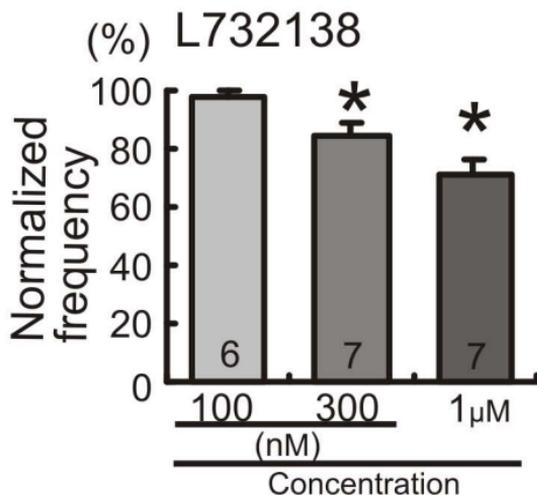


A



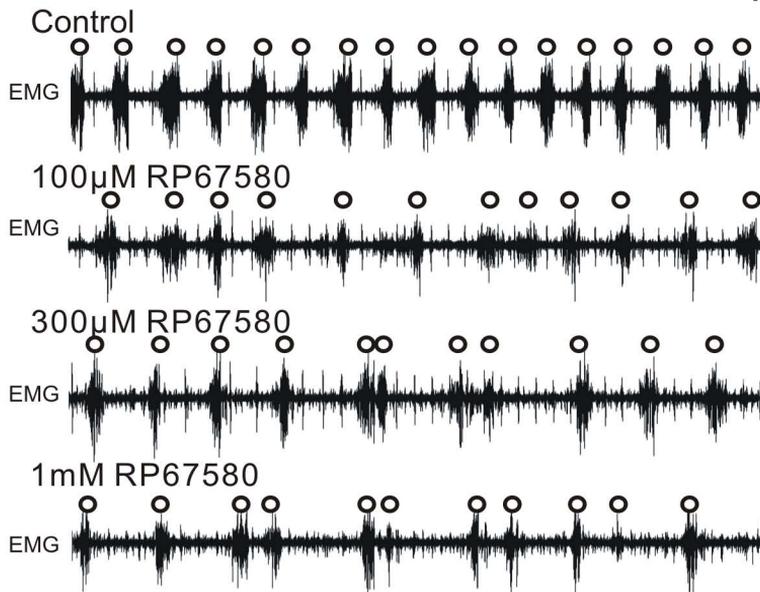
B



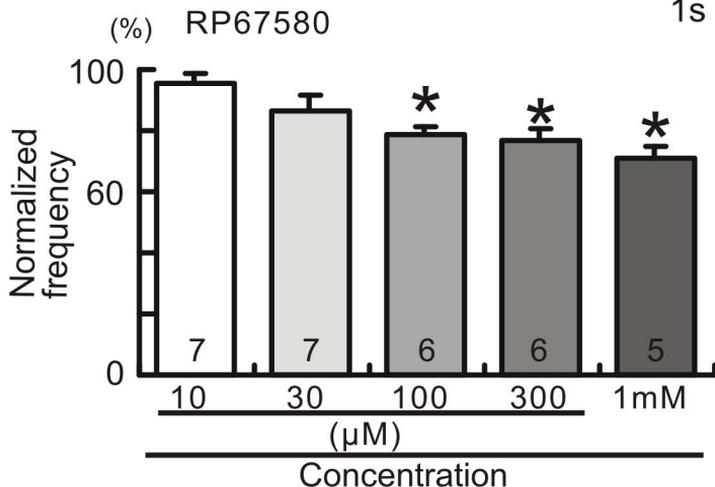
**Supplemental fig.1: Specific NK1 antagonists inhibit respiratory activity in the slice preparation containing the pre-BötC**

A, B: Bar graphs characterizing the effect of the specific NK1 antagonists GR82334 (A) and L732138 (B) on the respiratory frequency normalized to the control condition (= 100%). The antagonists consistently inhibit respiratory rhythmic activity in a dose dependent manner (\*  $p < 0.05$ ).

A



B



**Supplemental fig. 2: The injection of NK1 antagonist into the pre-BötC modulates respiratory frequency in the in vivo mouse.**

A: EMG activity obtained from the intercostal muscles under control conditions (upper trace) and in the presence of increasing concentrations of the NK1 antagonist RP67580 (2nd – 4th trace). B: RP67580 inhibits the normalized frequency of breathing in a dose dependent manner (\*  $p < 0.05$ ). The frequency was normalized to the control frequency before the application of the NK1 antagonist (= 100%).