



The three approach to test the integrity of the perforated patch configuration

A, Presence of the Alexa488 in the recording pipette but not inside the cell was monitored throughout the recordings . B, The current changes in response to a depolarizing 5mV pulse (seal test) during a representative recording. Note the sudden increase in the current after the rupture of the perforated patch induced by negative pressure application. C, The cell capability to produce action potential in response to an intracellular current pulse injection was also tested throughout the recordings. Note the inability to firing after the rupture of the patch, in consequence of the QX-314 diffusion into the cell, a sodium channel blocker applied in the intracellular solution for the perforated patch recordings. D, Changes in the bridge balance values during the recordings, indicating the series resistance in current clamp mode. Each color represents a recorded pair (n=7), each dot represents a current clamp recording preceded by a Alexa488 test (see A). Red vertical lines represent a successful test for the firing ability of the recorded cell (see C). In two cases (magenta and grey) the cell didn't survive the rupture of the patch by negative pressure application.