

PIEZO1 Patchliner

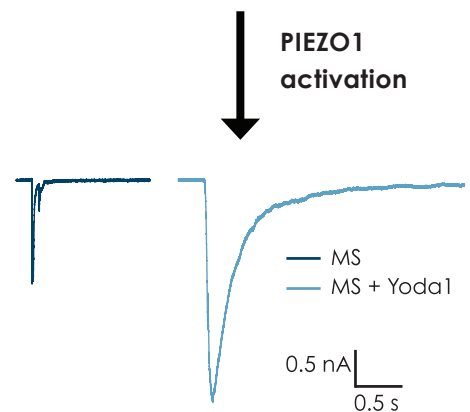
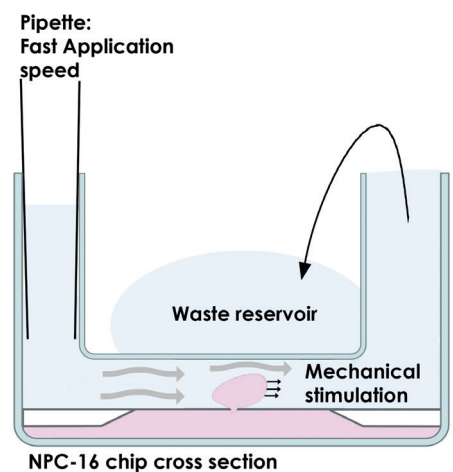
Investigating PIEZO1 using the Patchliner

PIEZO channels are mechanically activated cation channels, mediating various health and disease mechanisms such as red blood cell homeostasis, malarial resistance, vascular structure and function, and lymphoedema. The 2021 Nobel Prize for Physiology or Medicine was awarded in part for the discovery of ion channels responsible for touch, recognizing their crucial role in physiology and pathophysiology. A bottleneck in drug development targeting PIEZO channels has been the lack of patch clamp systems capable of applying mechanical stimulation in an automated, higher throughput manner.

Nanion's Patchliner enables mechanical stimulation of PIEZO1 channels in an automated patch clamp instrument, allowing for reliable quantification of PIEZO1 activation by fluid flow and Yoda1.



Contact us today



Patchliner

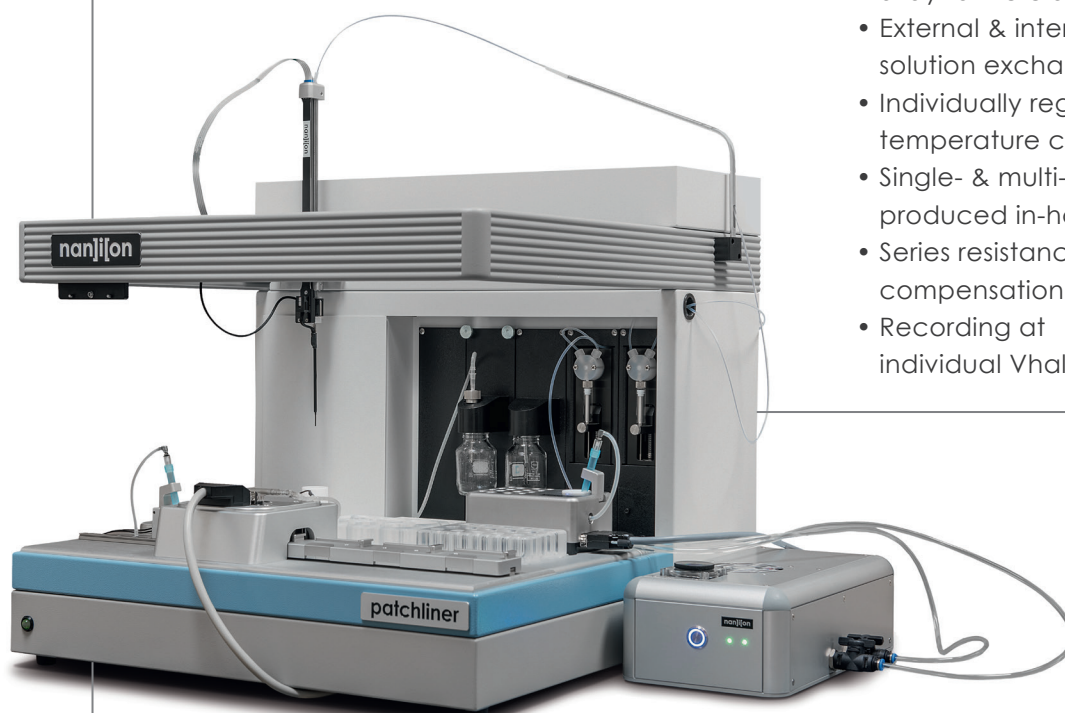
Electrophysiology in the fast lane

Ideal for mechanical stimulation experiments

- Large range of solution application speed (1 – 857 $\mu\text{l/s}$)
- Individual suction control per recording channel
- Suction range 1 – 350 mBar

Features

- 4 or 8 amplifier channels
- Voltage, current clamp & dynamic clamp
- External & internal solution exchange
- Individually regulated temperature control
- Single- & multi-hole chips, produced in-house
- Series resistance compensation
- Recording at individual V_{half}



Applications

- Voltage-, ligand- and heat-activated ion channels
- Mechanical stimulation
- Action potential pharmacology
- Whole cell and perforated patch
- Cell lines, primary cells and stem cells
- Minimized cell consumption
- Validated for CiPA
- Easy & customizable analysis tools
- User and Expert modes of operation