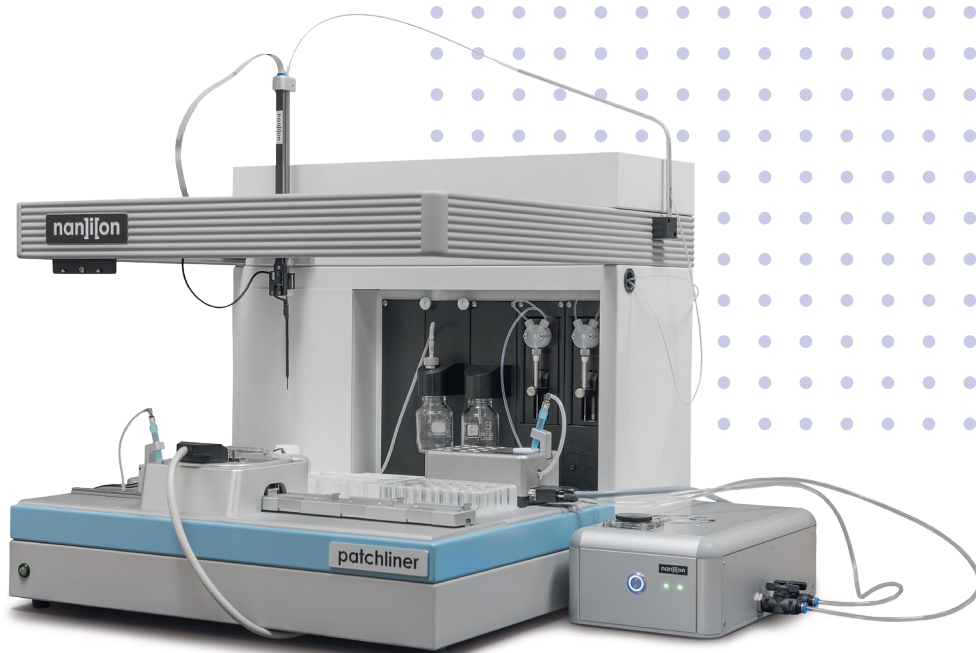




Patchliner

Because quality does matter

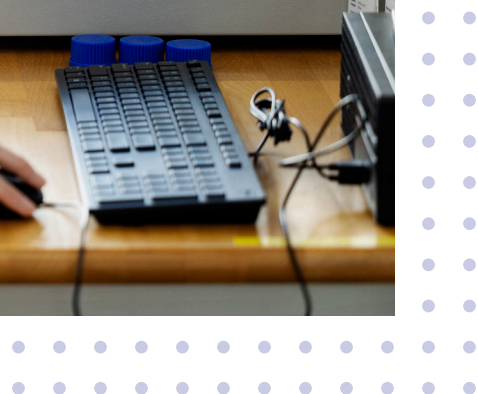


nanjion

Most versatile automated patch clamp system on the market

The Patchliner is a fully automated patch clamp system which records from either 4 or 8 cells simultaneously. The HEKA EPC10 amplifiers, full control over the pipette speed, ability to change protocols on-the-fly and flexible add-ons for

temperature control and dynamic clamp make this instrument the most versatile APC system on the market. The Patchliner is tried and tested and is appreciated in academia, industry and CROs alike since its introduction in 2006.



Key features at a glance

- | | | | |
|---|---------------------------------------|---|--------------------------------|
| 1 | Up to 8 cells recorded simultaneously | 5 | Dynamic clamp (optional) |
| 2 | High success rates | 6 | Fast external application |
| 3 | Voltage and current clamp as standard | 7 | Minimized exposure time |
| 4 | Sophisticated temperature control | 8 | Unlimited compound application |



Powerful data acquisition and analysis

PatchControlHT is a graphical user interface for straightforward and easy programming of protocols and experimental parameters.

- Quick and easy set up of experimental parameters
- Transfer voltage protocols from manual setup
- Display of online analysis during experiment
- Expert and User modes of operation
- Changes on-the-fly

Data Analysis Package for the Patchliner accelerates data analysis by automatic loading of data and EC_{50} or IC_{50} calculation.

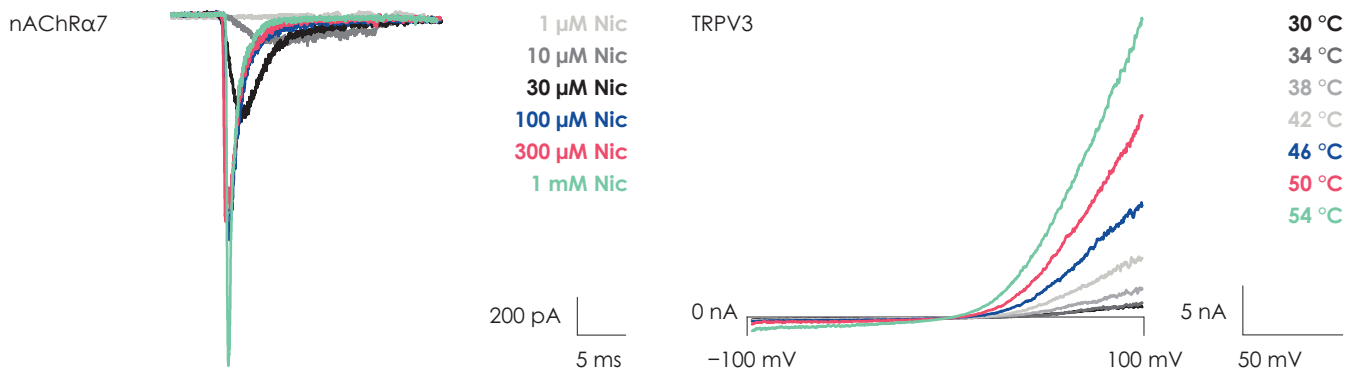
- Based on IgorPro
- Analysis performed with a few mouse clicks (IC_{50} , EC_{50} , V_{half})
- Display of raw data traces facilitates QC
- Instant recalculation of average plots after manual QC
- Pool data from different chips and days



PatchControlHT

Color-coding of seal resistance and compound addition facilitates an easy overview of the experiment in user mode.

Versatile and flexible: Research highlights

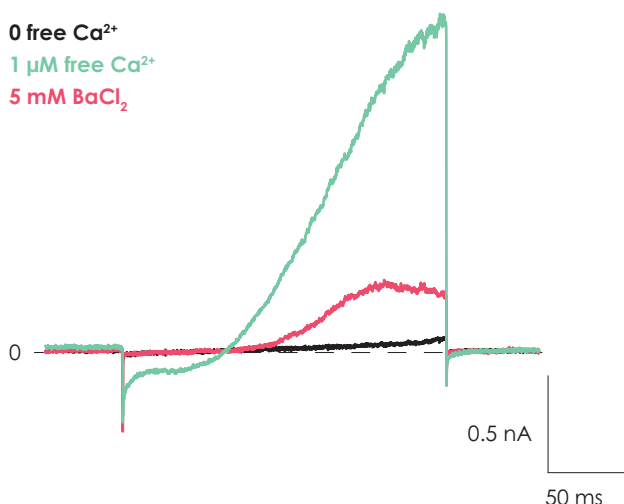


Ligand-gated ion channels

Fast pipetting speed and ability to stack solutions ensures reliable activation of fast desensitizing ligand-gated ion channels such as nicotinic $\alpha 7$ receptors. Stacking solutions inside the pipette minimizes exposure time by eliminating lengthy pick-up times.

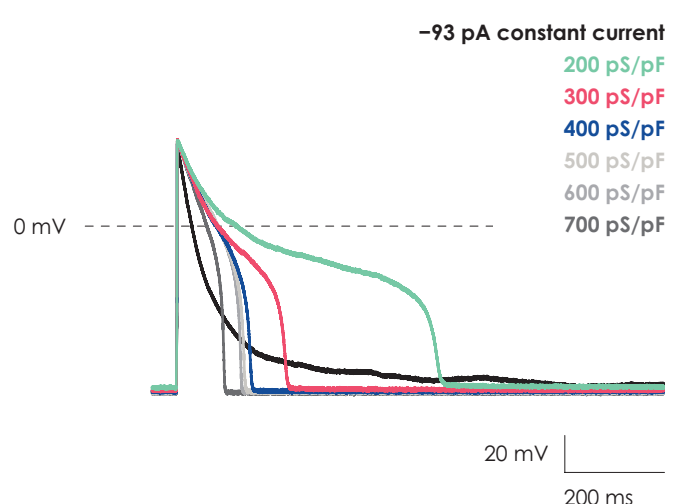
Heat activation

The sophisticated temperature control can be used to activate heat activated channels such as TRPV3. Solution is heated in the pipette and rapidly applied to the cell causing rapid and transient activation of TRP channels.



Internal exchange

The internal solution of the Patchliner can be exchanged during the experiment. This can be used to activate Ca^{2+} -activated channels such as $\text{K}_{\text{Ca}}3.1$.



Dynamic clamp

The Dynamite⁸, an add-on for the Patchliner for automated dynamic clamp, facilitating stable membrane potential and action potential duration.

Your research, our passion



Ion channels

Ideal for both voltage- and ligand-gated ion channels.



Assay development and validation

Full flexibility to design assays for a wide variety of cell lines.



Drug Discovery

Suitable for all phases of drug discovery in pharma and biotech.



CiPA validation study

The Patchliner is delivered fully compliant with the latest CiPA recommended guidelines.



Academic research

Easy solutions tailored to ensure your next scientific breakthroughs.



Channelopathies

Sophisticated functional assays for the discovery of ion channel mutations.



CROs

Deliver accurate, reproducible and high quality data on time and within budget.

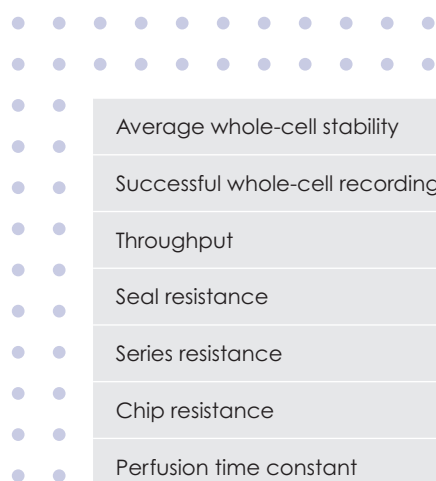


Primary cell/iPSC profiling

Low cell consumption for recording primary and stem cells.

The Patchliner includes

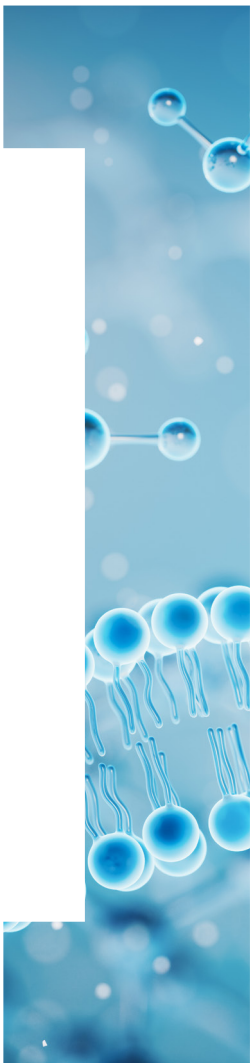
- Patchliner Quattro: 4 amplifier channels
- Patchliner Octo: 8 amplifier channels
- 1–2 HEKA EPC10 Quadro amplifiers
- Windows 10 OS with PatchControlHT and PatchMaster software
- Patchliner Data Analysis Package (incl. Igor Pro)
- NPC-16 borosilicate recording chips
- Reagent starter kit
- On-site installation support
- 1 year warranty with further optional comprehensive service plans available



Specifications

Average whole-cell stability	>30 minutes
Successful whole-cell recordings	70–90%
Throughput	250–600 data points per day
Seal resistance	>1 G Ω
Series resistance	<10 M Ω
Chip resistance	Low, medium, high, ultra-high, multi-hole (4X)
Perfusion time constant	<20 ms
Minimum exposure time	200 ms
Amplifier channels	4 or 8
Temperature control	Up to 60 °C (heating only)
Current clamp	Integrated as standard
CoolingPlate	Cooling of cell storage and compounds (optional)

accelerate your research



nanion Europe

The left vertical bar features a blue background with a molecular structure of two spheres connected by a bond, and a cluster of spheres with wavy lines extending from them.

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