Patchliner^{e}

Evolved.

nan]i[on

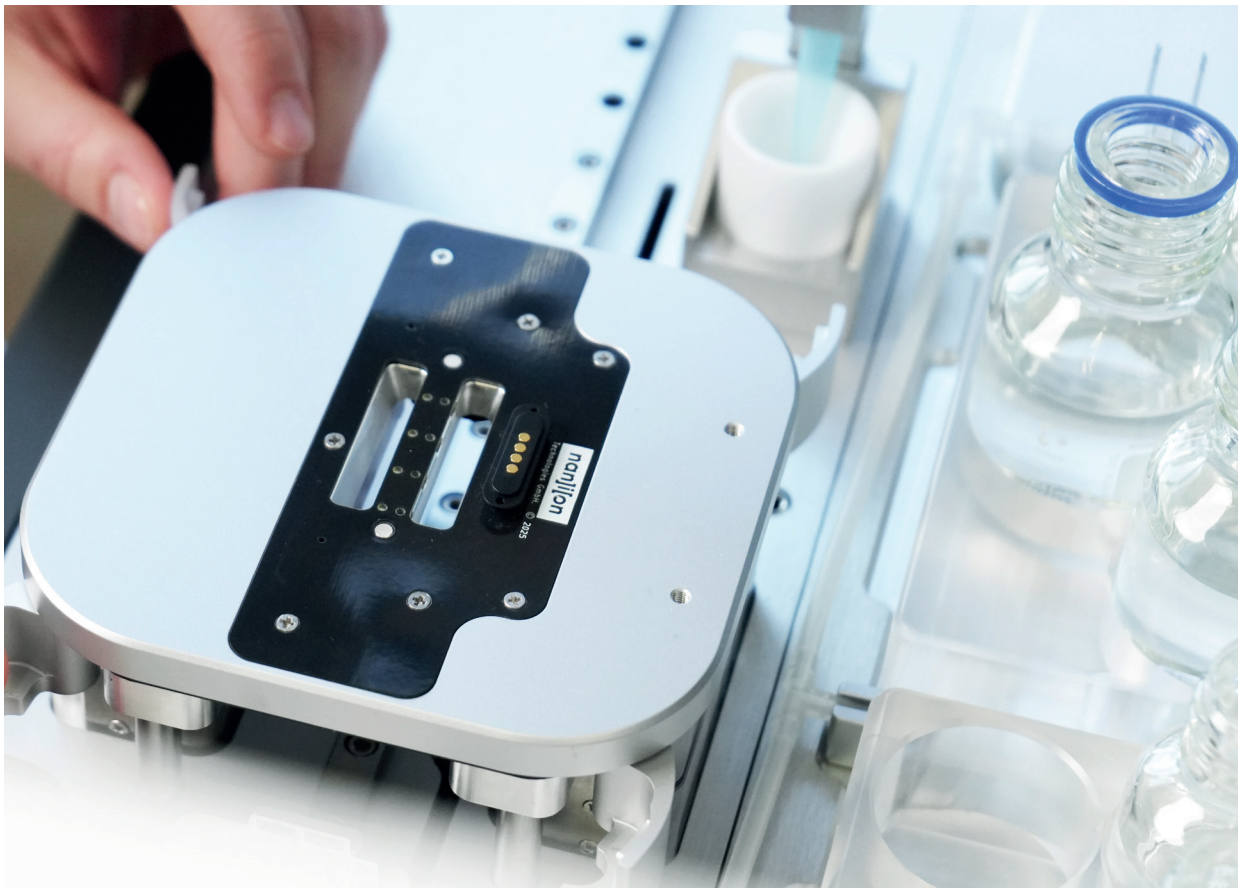
The next generation of versatility in automated patch clamp

The Patchliner[e] is the evolution of Nanion's fully automated patch clamp platform, building on two decades of proven performance. With state-of-the-art Elements amplifiers at its core, and driven by a modern user-focused interface, it delivers automation that is both powerful and straightforward.

Patchliner[e] offers clear experimental workflows and intuitive software for recording and analysis. Miniaturized amplifiers are integrated into the trusted Patchliner robot, resulting in a compact system design. Smart usability and ergonomic handling concepts take the Patchliner's valued versatility and reliability to the next level.

Key features at a glance

1. Fully automated recordings of up to 8 cells simultaneously
2. High success rates using low cell numbers
3. Intuitive, user-friendly software for data acquisition and analysis
4. Integrated amplifiers with voltage and current clamp*
5. Fast and precise external application with minimized exposure time
6. Unlimited compound application
7. Sophisticated temperature control allowing heat activation
8. Compact footprint with ergonomic handling



* dynamic clamp optional

Intuitive protocol setup, powerful data acquisition and analysis

PatchlinerControl is a proprietary software for experimental setup and data acquisition for the Patchliner^{e}.

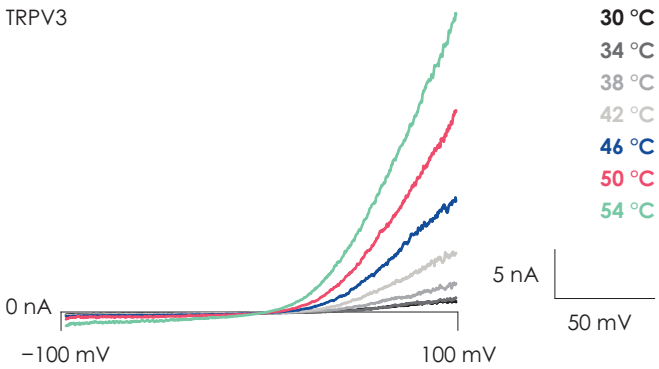
- Fully automated experiment execution.
- Real-time control and on-the-fly adjustments.
- Fast, intuitive setup with predefined commands.
- Clear, live data visualization of individual wells.
- Automated quality control for reliable data acquisition and analysis.

DataControl PL is a standalone software designed for easy review and analysis of data recorded on the Patchliner^{e} and Patchliner^{m}.

- Straightforward data review and analysis configuration.
- Centralized database for data filtering / selection.
- Multi-chip data pooling.
- Multiple analysis types supported e.g. IC_{50}, EC_{50}, IV pharmacology, and more.
- Customizable data reporting.

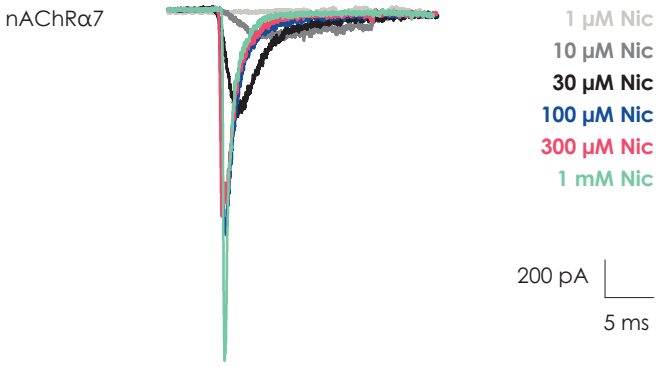
PatchlinerControl *interface shows multi-well recordings with real-time data acquisition, protocol control, and instant online analysis in a single unified view.*

Versatile and flexible: Research highlights



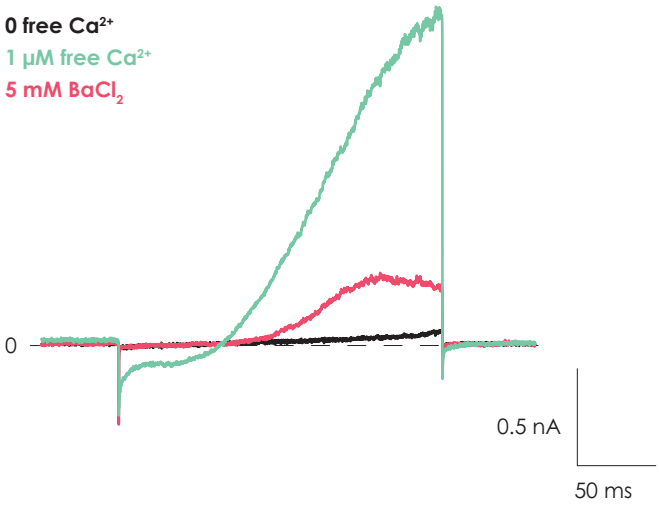
Heat activation

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.



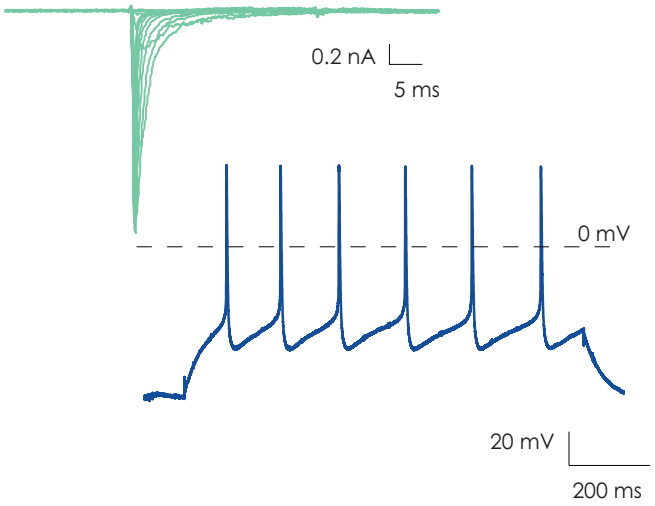
Ligand-gated ion channels

Fast pipetting speed and ability to stack solutions ensures reliable activation of fast desensitizing ligand-gated ion channels such as nicotinic α7 receptors. Stacking solutions inside the pipette minimizes exposure time by eliminating lengthy pick-up times.



Internal exchange

The internal solution of the Patchliner[e] can be exchanged during the experiment. This can be used to activate Ca^{2+}-activated channels such as $K_{Ca}3.1$.



Induced pluripotent stem cells (iPSCs)

Patchliner[e] reliably records ionic currents and action potentials from iPSC-derived cells, with high success rates and low cell numbers. Eg. RealDRG™ sensory neurons (Anatomic Inc.).

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[e] 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.

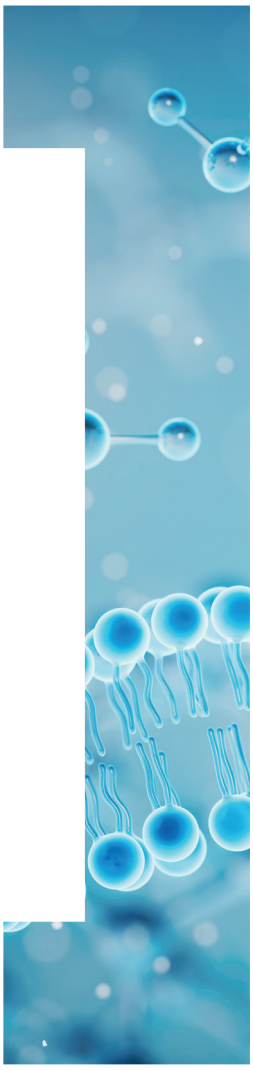
The Patchliner[e] includes

- **Patchliner[e]: 8 amplifier channels**
- **Integrated high-quality, research grade Elements amplifiers**
- **Windows 11 with PatchlinerControl and DataControl PL**
- **NPC-16 borosilicate recording chips**
- **Reagent starter kit**
- **On-site installation support and training**
- **1 year warranty with further optional comprehensive service plans available**

Specifications

Average whole-cell stability	**>30 minutes**
Successful whole-cell recordings	**70–90%**
Throughput	**400–600 data points per day**
Seal resistance	**>1 GΩ**
Series resistance	**<10 MΩ**
Chip resistance	**Low, medium, high, ultra-high, multi-hole (4X)**
Perfusion time constant	**<20 ms**
Minimum exposure time	**200 ms**
Amplifier channels	**8 channels Elements integrated amplifier**
Temperature control	**Up to 60 °C (heating only)**
Current clamp	**Integrated as standard**
CoolingPlate	**Cooling of cell storage and compounds (optional)**

accelerate your research



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