



# SyncroPatch 384

For all your patch clamp needs



nanjion

# Unprecedented flexibility for HTS automated patch clamp

The SyncroPatch 384 is a revolutionary automated patch clamp system combining high quality electrophysiological data acquisition and analysis with state-of-the-art liquid handling.

With 384 amplifier channels and a 384-pipetting head, up to 384 cells can be recorded in parallel, resulting in a throughput of up to 20,000 high-quality data points per day.

With its ease-of-use and open design, the SyncroPatch 384 is much more than a fully automated HTS system. It can be efficiently used for lower throughput applications.

The SyncroPatch 384 is ideally suited for academic research labs, CROs and industrial research because of its unprecedented flexibility, including 32-well mode, unattended mode, advanced temperature control, stacked compound addition and the use of fluoride-free solutions.



# Key features at a glance

- |          |                                  |          |                                       |
|----------|----------------------------------|----------|---------------------------------------|
| <b>1</b> | 384 recordings in parallel       | <b>5</b> | 32-well mode for smaller projects     |
| <b>2</b> | Giga-seal recordings             | <b>6</b> | Single- or multi-hole chips           |
| <b>3</b> | Up to 20,000 data points per day | <b>7</b> | Up to 95 % success rate               |
| <b>4</b> | Advanced temperature control     | <b>8</b> | Voltage and current clamp as standard |



# Efficient data handling and export

**PatchControl 384** is a powerful graphical user interface for intuitive, quick and easy setup of voltage protocols and experimental parameters.

- Intuitive, quick and easy-to-use setup of experiments
- Broad range of QC options
- Color-coding of recording wells based on set QC parameters
- Raw data and analysis results viewed in the same window
- Standard and advanced operation

**DataControl 384** accelerates data analysis by quick and easy loading of recorded files and user defined analysis templates.

- Analysis performed with a few mouse clicks ( $IC_{50}$ ,  $EC_{50}$ ,  $Z'$  values,  $V_{half}$  etc.)
- Data analysis templates display results within seconds
- Instant re-calculation upon parameter changes
- Heat maps for intuitive overview of compound effects
- Customized data export
- Word, Excel, csv and pdf reporting



## DataControl 384

Scroll through the data, select a data analysis template or fit parameters. Results, compound information and QC parameters are exported in a user-defined export format, ready for further database integrations.

# For all your patch clamp needs

## Choose your throughput

The 32-well mode transforms the SyncroPatch 384 into a lower throughput device, enabling both larger and smaller screens in one instrument, and making the most out of the low price per data point.

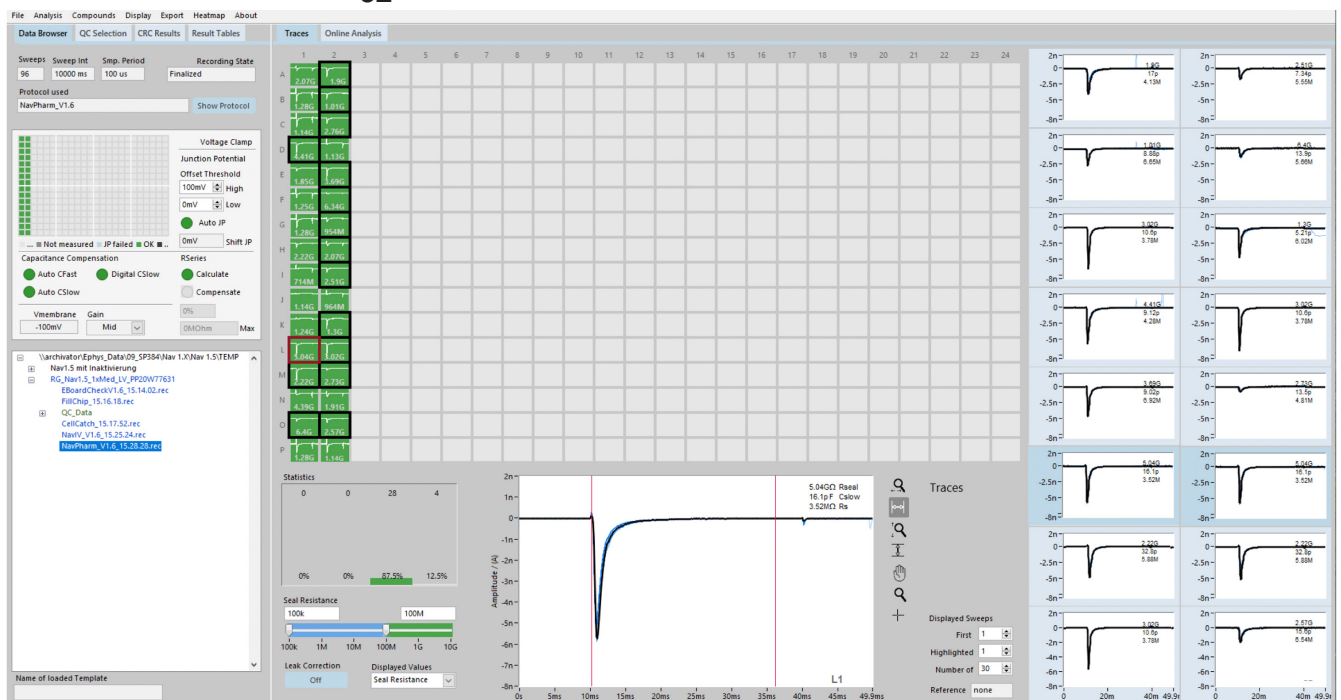
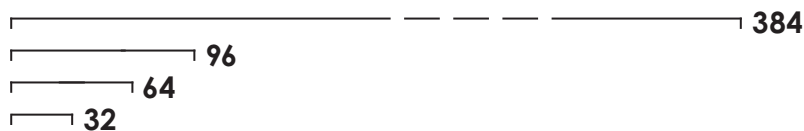
- Use parts of the chip—in multiples of 32 wells
- Use remaining chip over several days with no reduction in success rate
- Perfect for assay development, biophysical studies and smaller screening projects

## Advanced temperature control

An advanced temperature control system allows precise control of the temperature (10–37 °C) at the measurement site and at 12 deck positions.

- Recordings at physiological temperature
- Temperature-controlled module, solutions and cell hotel
- Cooling and heating

Up to 20,000 dp/day



# 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 SyncroPatch 384 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.

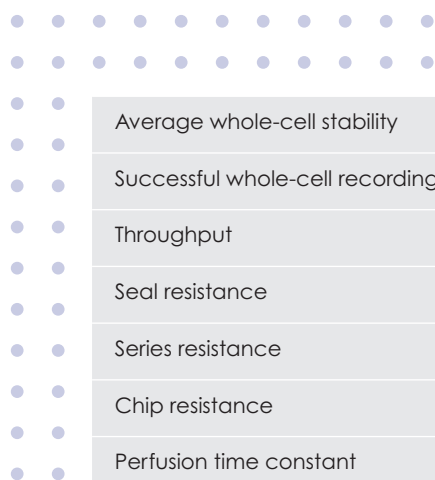


## Primary cell/iPSC profiling

Low cell consumption for recording primary and stem cells.

# The SyncroPatch 384 includes

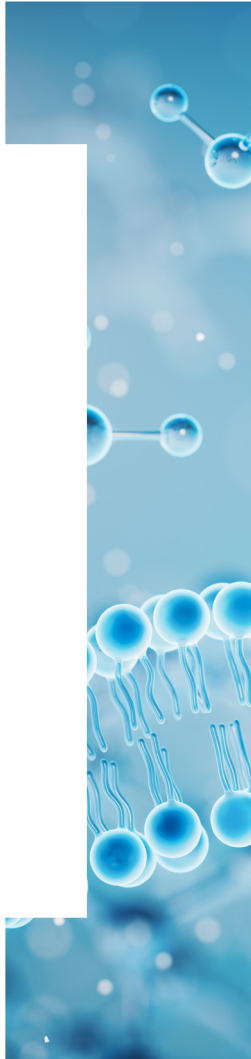
- Biomek i5 liquid handler with a 384-pipettor arm and gripper
- Windows 10 OS with PatchControl 384 and DataControl 384 software suite
- Temperature-controlled patch clamp module and deck positions
- NPC-384 borosilicate recording chips
- 384 channel amplifier incl. current clamp
- Guided Labware Setup and Method Launcher
- 1 year warranty with further optional comprehensive service plans available
- Unmatched technical and application support



## Specifications

Average whole-cell stability	>30 minutes
Successful whole-cell recordings	Up to 95 %
Throughput	20,000 data points per day
Seal resistance	>1 G $\Omega$
Series resistance	<10 M $\Omega$
Chip resistance	~3 M $\Omega$ (different ranges available)
Perfusion time constant	<50 ms
Minimum exposure time	<1 s
Liquid handling robot	Biomek i5 (Beckman Coulter)
Amplifier channels	384
Number of pipettes	384
Temperature control	10–37 °C (integrated as standard)
Current clamp	Integrated as standard

# accelerate your research



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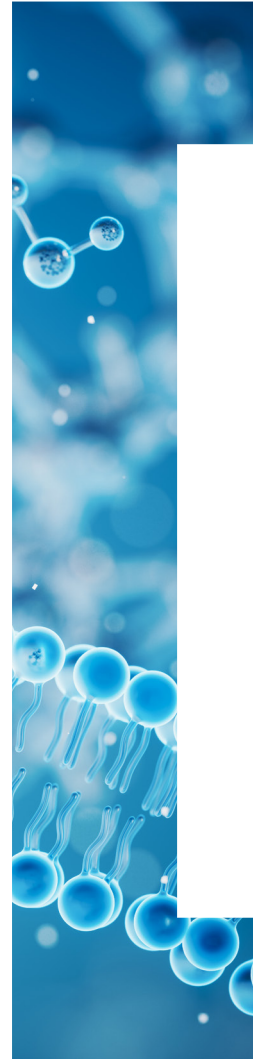
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