



Advanced temperature control SyncroPatch 384

Temperature: critical factor in ion channel studies

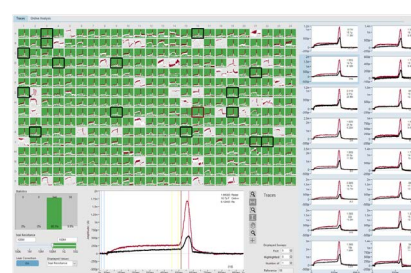
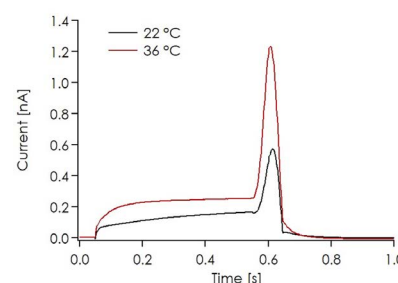
Accumulated evidence suggests that temperature has a significant impact on ion channel biophysics, affecting both ion channel gating and conductance. Effects of various drugs on ion channels are also temperature sensitive. Therefore, studying ion channels at physiological temperature is essential, as it can offer new valuable insights into developing treatments for ion channel-related disorders. In line with this understanding, the FDA emphasizes the importance of assaying CiPA ion channels at physiological temperature to ensure relevant and accurate results.

Nanon's Syncropatch 384 enables you to conduct high-throughput recordings at physiological temperature. An advanced temperature control system allows precise control of the temperature (in the range 10 – 37°C) at the measurement site, cell hotel as well as at 12 deck positions.



Contact us today

hERG – best practice



Recommended recording temperatures near to physiological values (35 – 37°C) are better for prediction of a test compound impact on ion channels in the clinical setting (ICH E14/S7B). Faster kinetics and larger hERG currents in the CiPA step-ramp protocol.

SyncroPatch 384

Advanced temperature control

Precise temperature control at the measurement sites

- Perform recordings at physiological temperature.
- Record temperature sensitive channels.

Cooled cell hotel

- Precise control of the temperature in the cell hotel.
- Keep you cells viable even for long unattended runs.



Cooling unit

12 temperature-controlled deck positions

- Individual temperature control for each deck position (from 10° to 37°C).
- Each of the 12 positions equipped with a labware detection sensor.
- The LEDs highlight temperature status of solutions in each of the 12 positions.

Additional features:

- Evaporation minimization due to automatic lid removal feature, keeps solutions at the set temperature and avoids osmolarity changing over time.
- Automatic dew point calculation, with low temperature settings limited to 2°C above dew point to prevent water condensation inside the patch clamp module.
- Special black labware made of aluminum and coated with Teflon, possessing excellent thermal conductivity properties.