

Electrophysiology Services

Your Channel, Our Solution

Ion channels are the second largest class of membrane protein targets after GPCRs and roughly 20% of small molecule drugs listed in the ChEMBL database target ion channels.

Our team of expert electrophysiologists is equipped with a wide range of advanced devices, allowing us to support your needs in ion channel drug discovery.

Customized Cell Line Engineering

- Generation of constructs optimized for ion channel expression
- Functional clone selection
- Biophysical and pharmacological validation
- State-of-the-art ion channel characterization by electrophysiological methods (manual and automated patch clamp)
- Electrical activity in populations of cells, facilitating the analysis of collective cellular responses and interactions

High-Throughput Screening

- Assay adaptation
- Access to 350.000 compounds of **AXXDiversity** library
- Large screening campaigns
- Strong correlation between electrophysiology and surrogate techniques
- SyncroPatch 384i (Nanion)

Mode of Action Studies

- Manual patch-clamp
- Molecular biology facilities (single point mutations, knock-in, knock-out and more)



Electrophysiology and iPS

- Manual patch on iPS derived cells
- Organellar electrophysiology on lysosomes from iPS derived neurons
- MEA (for iPS derived neurons and cardiomyocytes)

Medium-Throughput Screening

- Hit confirmation, SAR campaign, hit-to-lead studies
- Selectivity and specificity assays
- Compound profiling
- Cardiac safety ion channels panel QPatch II 48X, QPatch 16X (Sophion)
- Maestro PRO MEA Platform (Axion BioSystems)

Innovation

- Optogenetics (manual and automated patch clamp, MEA)
- Organellar electrophysiology (mitochondria, lysosomes, nuclei)
- Automated lysopatch

