

Product Specification:

QCells

HEK-hNa_v1.2 α + β 1 optimized for the QPatch

Cells provided by SB Drug Discovery



- Cells optimized for the QPatch
- Tight sealing properties
- Optimal success rates
- Stable current response
- Cell line support
- Optimized Ringer's solutions
- Custom assay and analysis

See specifications on back

Human $\text{Na}_v 1.2$ is commonly found in CNS and is part of the tetrodotoxin sensitive (TTX-S) sodium channels. The channel is an interesting target for generating antiepileptic drugs. The channel is responsible for generation and propagation of action potentials in muscles and neurons.

Sophion's unique experience with automated patch clamping and cell culture optimizations means that we can offer QPatch optimized cells, QCells, for your experiments, which guarantees a uniform cell line with a near perfect and stable expression profile. Sophion collaborates with a number of cell line vendors to provide your cell line of choice.

This Qcell, HEK-h $\text{Na}_v 1.2 \alpha+\beta1$, is now available for purchase directly from Sophion, and was developed and optimized in collaboration with SB Drug Discovery.

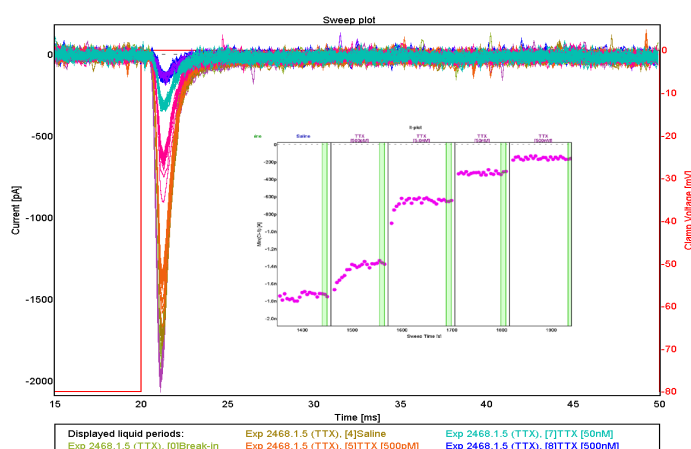


Fig. 1 Raw data sweep. The cell is depolarized from -80 mV to 0 mV for 30 ms with four increasing doses of TTX. Insert shows the corresponding IV-plot.

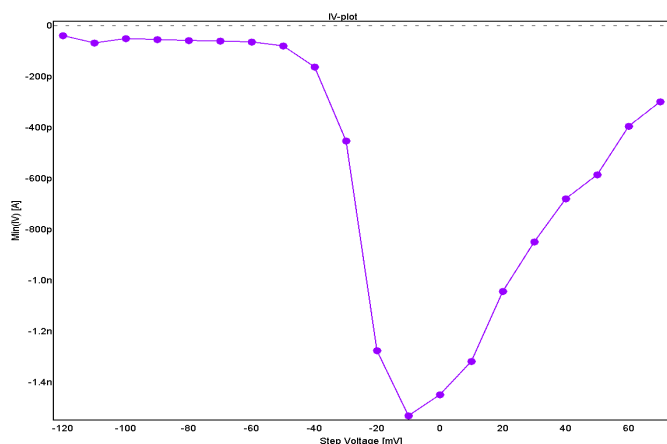


Fig. 2 Current versus voltage (IV) plot of peak current.

QCell properties	
Mean current amplitude	-1.14±0.10 nA, n=38
IC ₅₀ TTX	11.26±0.93 nM, n=21
V _{1/2} for inactivation	-53.06±0.93 mV, n=24
IV max current	-5.83±1.33 mV, n=24

QPlate success rates	
No. of QPlates	4
Cell attachment (%)	98
Seal > 100 MΩ (%)	63
Seal > 1 GΩ (%)	42
Whole-cells (%)	81
Completed experiments (%)	59
Representative whole-cell lifetime (min)	22