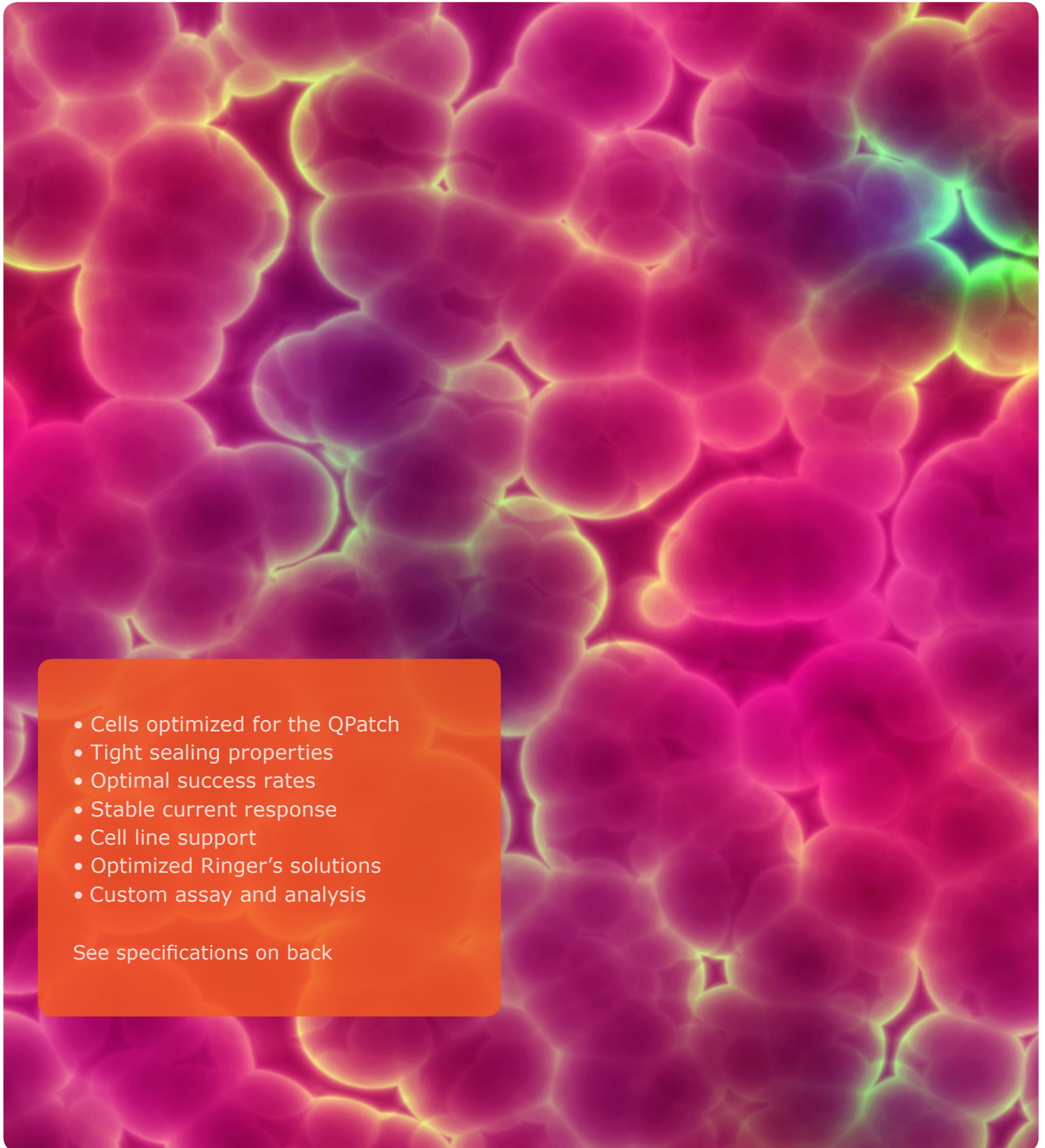


QCells

HEK- $\text{Na}_v1.7$ optimized for the QPatch



- 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

$\text{Na}_v1.7$ is a voltage-gated, sodium ion channel which in humans is encoded by the *SCN9A* gene. $\text{Na}_v1.7$ is present in nociceptive dorsal root ganglion (DRG) neurons and sympathetic ganglion neurons, which are part of the autonomic nervous system. The $\text{Na}_v1.7$ channel produces a rapidly activating and inactivating current which is sensitive to tetrodotoxin.

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- $\text{Na}_v1.7$, is now available for purchase directly from Sophion, and was developed and optimized in collaboration with Millipore.

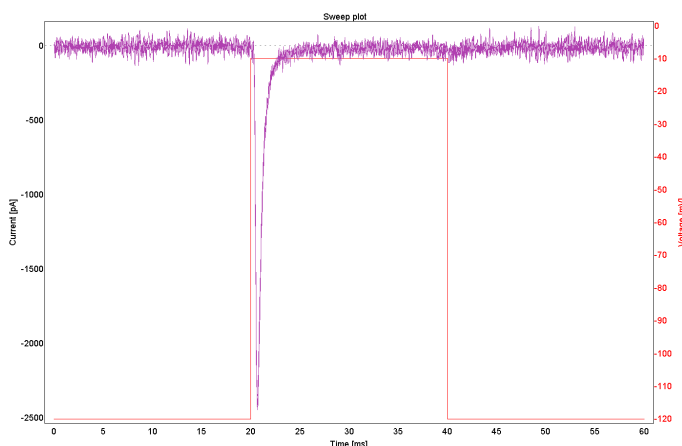


Fig. 1 Raw data sweep. The cell is depolarized to -10 mV for 20 ms from a holding potential of -120 mV

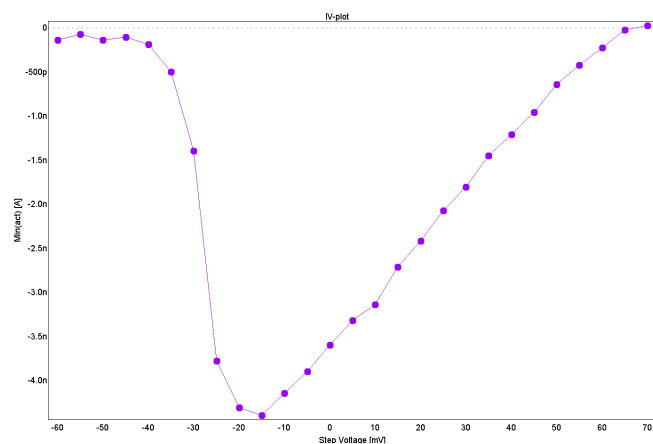


Fig. 2 Current versus voltage (IV) plot of peak currents.

QCell properties

Mean current amplitude	4 ± 0.3 nA
$V_{1/2}$ for inactivation	-73 mV
Voltage for max. current	-18 mV

QPlate success rates

Number of QPlates	4
Cell attachment (%)	96
Seal > 100 M Ω (%)	90
Seal > 1 G Ω (%)	75
Whole-cells (%)	83
Completed experiments (%)	83
Representative whole-cell lifetime (min)	40