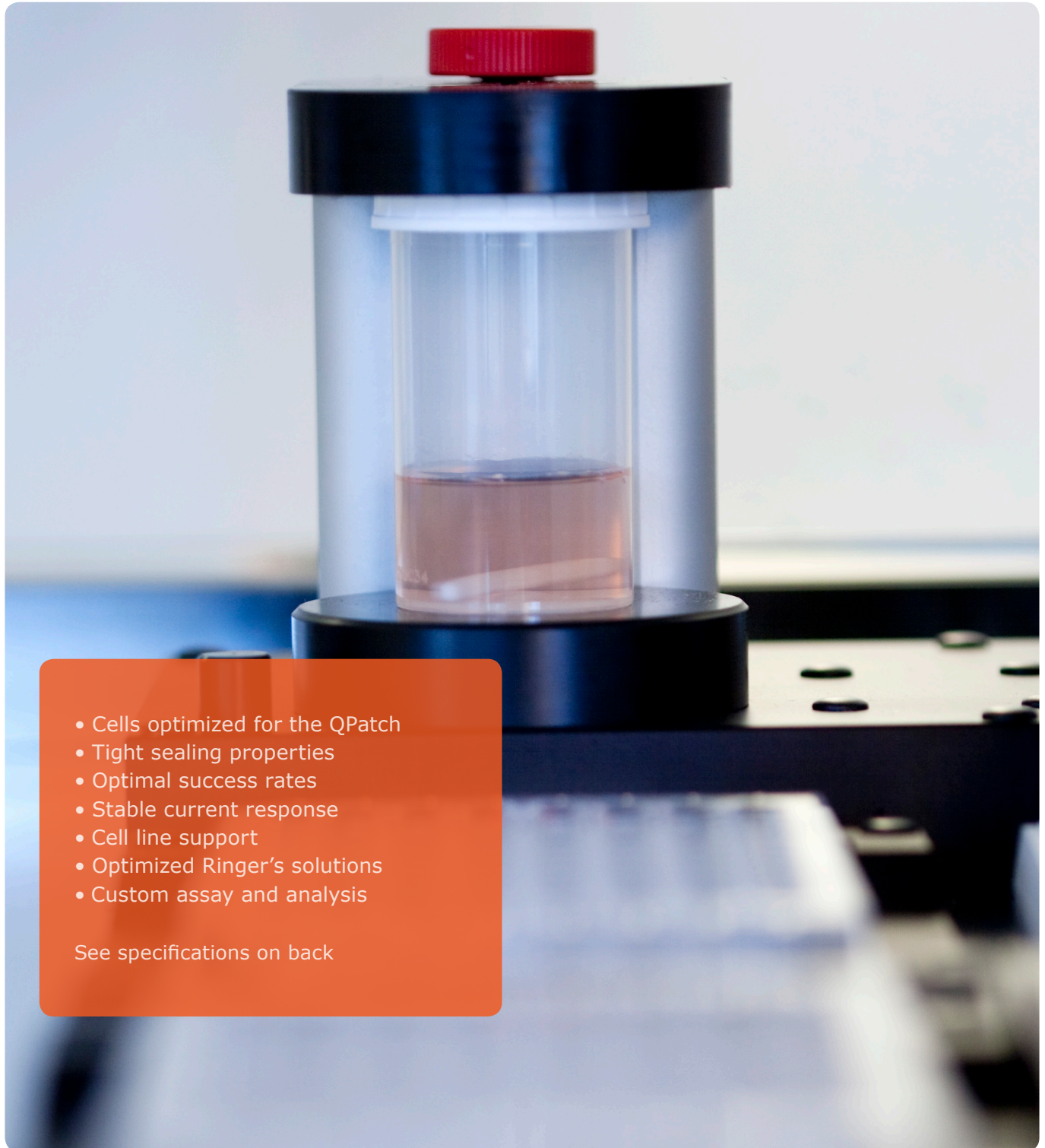


Product Specification:



QCells

HEK- $\text{Na}_v1.5$ 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

The $\text{Na}_v1.5$ sodium ion channel is located in the heart and is an integral membrane protein encoded by the *SCN5A* gene. The protein contains a tetrodotoxin-resistant voltage-gated sodium channel subunit. The encoded protein is found primarily in cardiac muscle and plays a key role in generation of the cardiac action potential (cardiac excitability) and propagation of the electrical impulse in the heart.



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- $\text{Na}_v1.5$, is now available for purchase directly from Sophion, and was developed and optimized in collaboration with Scottish Biomedical.

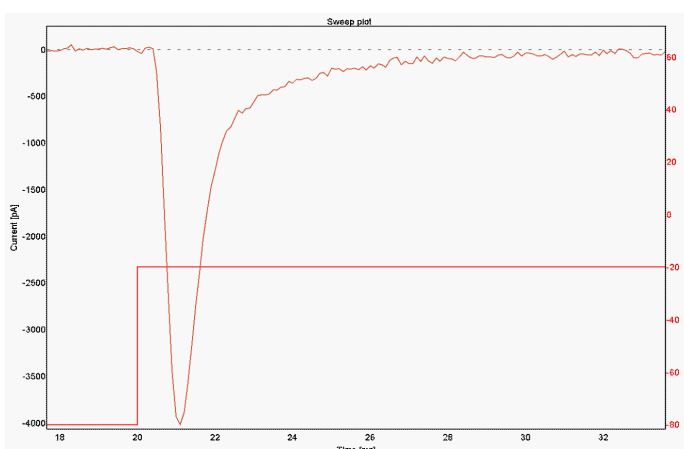


Fig. 1 Leak subtracted raw data trace.

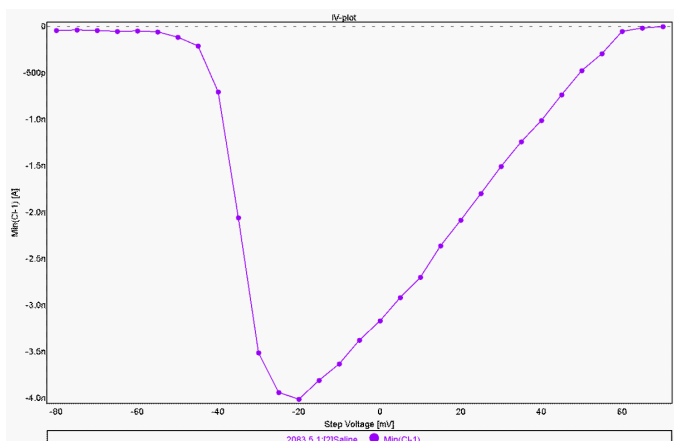


Fig. 2 Current-voltage (IV) relationship for activation.

QCell properties	
Mean current amplitude single-hole	1.7 ± 0.5 nA
Mean current amplitude multi-hole	5.0 ± 0.6 nA

QPlate success rates	Single-hole	Multi-hole
Cell attachment (%)	88	100
Seal > 100 M Ω (%)	81	31
Seal > 1 G Ω (%)	50	n/a
Whole-cells (%)	63	100
Completed experiments (%)	56	100
Representative whole-cell lifetime (min)	15	15