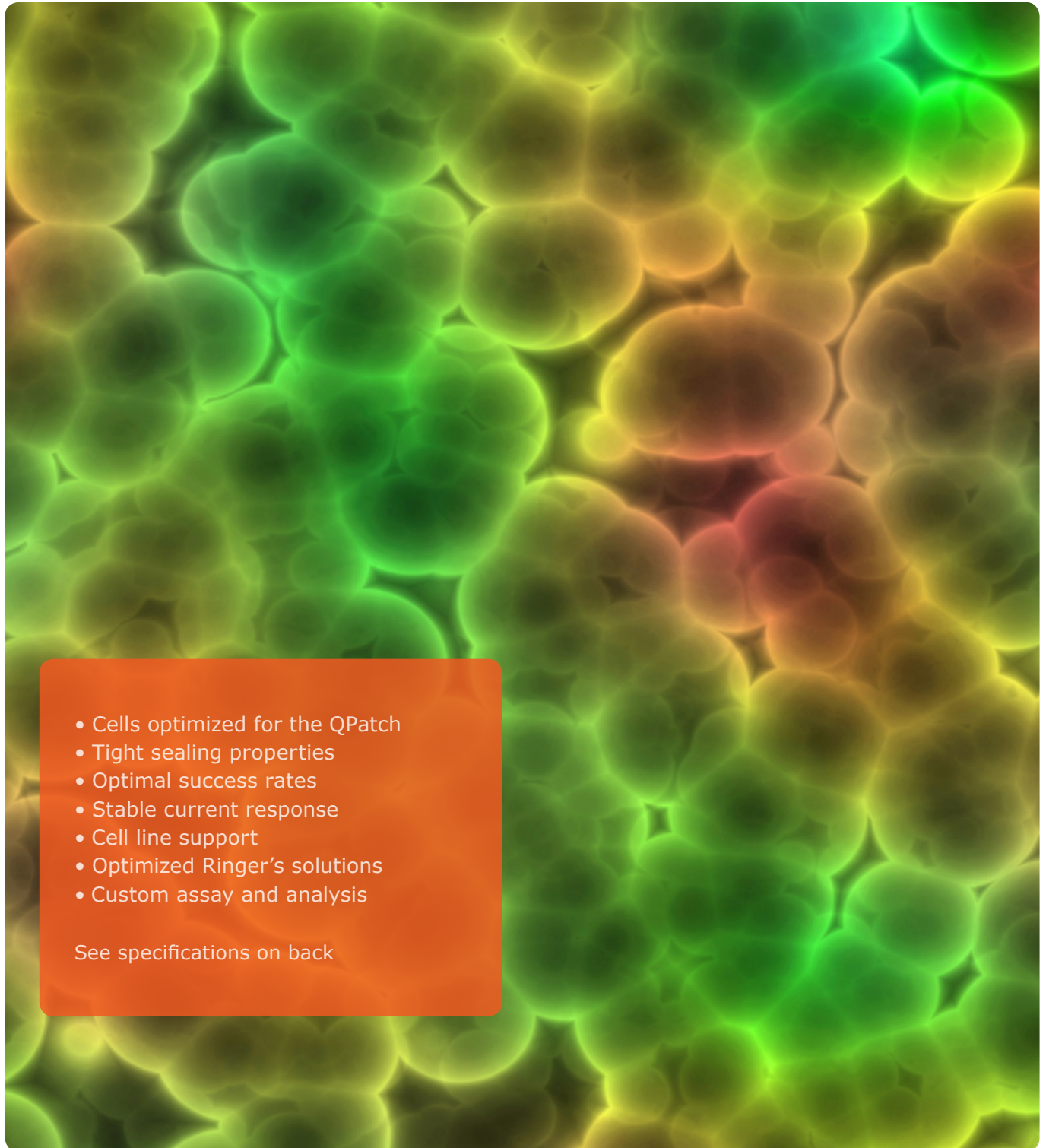


Product Specification:



QCells

CHO-K_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 voltage-gated potassium channel K_v1.5 is encoded by the KCNA5 gene (shaker-related subfamily) and the protein is expressed in the human heart, where it underlies the ultrarapid delayed rectifier I_{K_{ur}} current vital for atrial repolarization. Atrial arrhythmias are a common problem in cardiological practice and despite the availability of several antiarrhythmic drugs there is a medical need for safer and more efficient treatments.

Steinbeis-Transferzentrum
Angewandte Biologische Chemie

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, CHO-K_v1.5, is now available for purchase directly from Sophion, and was developed and optimized in collaboration with STZ.

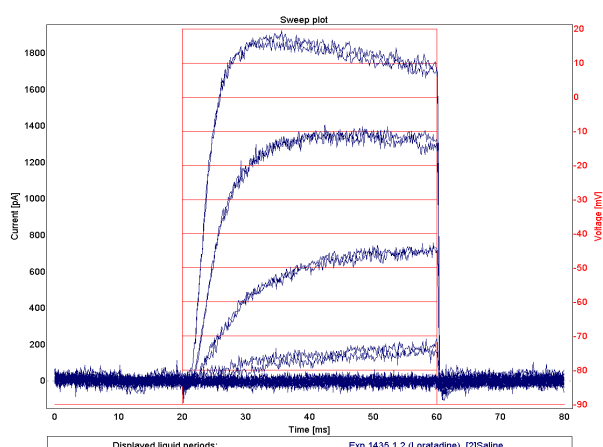


Fig. 1 K_v1.5 raw data sweeps measured at potentials from -80 mV to +20 mV, with 10 mV steps.

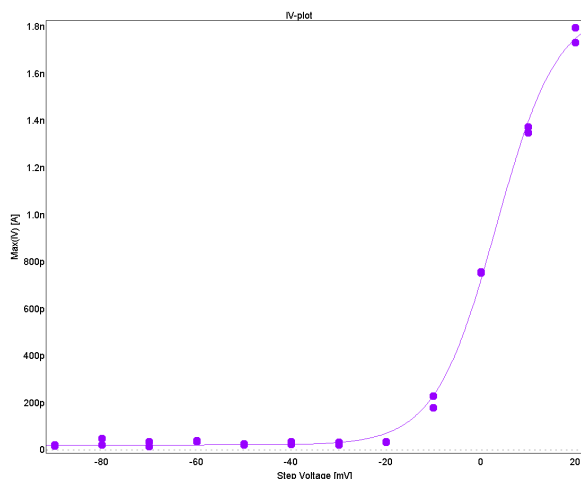


Fig. 2 Current versus voltage (IV) plot of peak currents.

QCell properties

Mean current amplitude single-hole	2.4±0.7 nA
Mean current amplitude multi-hole	8.0±0.7 nA
IC ₅₀ loratidine	3.9 μM
EC ₅₀ 4-aminopyridine	64 μM

QPlate success rates

	Single-hole	Multi-hole
No. of QPlates	3	3
Cell attachment (%)	98	100
Seal > 100 MΩ (%)	98	69
Seal > 1 GΩ	50	n/a
Whole-cells (%)	88	100
Completed experiments (%)	85	100
Representative whole-cell lifetime (min)	15	15