SOPHION BIOSCIENCE | Discover more

Product Specifications:

QPlate - Measurement plate for QPatch

- GΩ seal formation in physiological solution
- Maintenance-free electrodes
- Electrode stability - Voltage offset drift no more than Voff <0.005 mV/min
- Microfluidic channels enable washes and application of multiple concentrations/ compounds per well
- Microfluidic channels ensure fast and accurate liquid exchange
- Glass-coated flow channels minimize adsorption of compounds
- Cell positioning and whole-cell configuration formed by suction
- 8, 16 or 48 individually controlled patch clamp measurement sites
- Single- and multi-hole technology
- QPlate HiR suited for e.g., organelle and small cell patch clamp

The heart of the QPatch technology is the silicon-based patch clamp orifice, which replaces conventional glass pipettes known from manual patch clamping and enables giga-ohm seals in physiological solutions, which is not a given with planar patch clamping. Therefore, the QPlate technology is proprietary to Sophion.

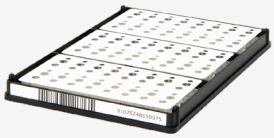
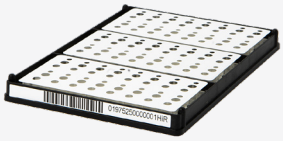
QPlate has microfluidic architecture to enable fast and accurate liquid exchange. Combined with the glass surface, you get a consumable that ensures high-fidelity data for both voltage- ligand- pressure- and temperature-gated ion channels.

In the QPlate, there is a waste reservoir for each site, which means that you can add multiple compounds or concentrations of compounds to the same site, so the cell acts as its own control. The throughput is also increased that way.

The QPlates exist in both single- and multi-hole versions; the latter is to even out variations in the biological background, provide sufficient current for low-expressing cells, and increase success rates.

QPlate HiR, are QPlates with a higher resistance due to a reduced patch hole diameter compared to the ordinary single hole QPlates. QPlate HiR are suited for e.g., organelle and small cell patch clamp on QPatch 16, 48, and QPatch Compact. QPlate HiR come as single-hole QPlates.

QPlate recording sites are equipped with maintenance-free individual electrode pairs, ready out of the back, inexhaustible and resistant to electrode drift, again to ensure that the electrophysiological recordings are as genuine as possible.

	Single-hole	Multi-hole	HiR
QPlate 8			
QPlate 16			
QPlate 48			

GD15518-11
2025

	QPlate 8	QPlate 8X	QPlate 8 HiR	QPlate 16	QPlate 16X	QPlate 16 HiR	QPlate 48	QPlate 48X	QPlate 48 HiR
QPatch Compact	•	•	•						
QPatch 16				•		•			
QPatch 16X				•	•	•			
QPatch 48							•		•
QPatch 48X							•	•	•

QPlate Dimensions:	QPlate 8 / QPlate 8 HiR	QPlate 8X	QPlate 16 / QPlate 16 HiR	QPlate 16X	QPlate 48 / QPlate 48 HiR	QPlate 48X
Dimensions L x W x H (mm)	115 x 48 x 9 mm		128 x 85 x 7 mm			
Weight	24 g		27 g		62 g	
Chips/plate	8		16		48	
Patch clamp holes per site	1	10	1	10	1	10
Priming resistance (MΩ)*	2.0 ± 0.4 / 4.1 ± 0.4	0.2 ± 0.04	2.0 ± 0.4 / 4.1 ± 0.4	0.2 ± 0.04	2.0 ± 0.4 / 4.1 ± 0.4	0.2 ± 0.04
Frame colour	Black	Blue	Black	Blue	Black	Blue
Max. pipetting	15 µL					
Min. pipetting	2 µL					
Waste reservoir	250 µL					
Chip material	Si/glass					
Chip capacitance	55 ± 5 pF					
Minimum order	5					
Pack size	1		5			
Storage conditions	5°C					
Opened pack life	one week		one day		one day each insert	

*Using physiological solutions

Sophion Bioscience A/S
info@sophion.com
sophion.com