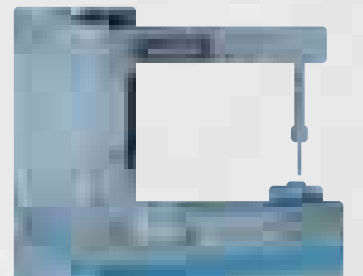
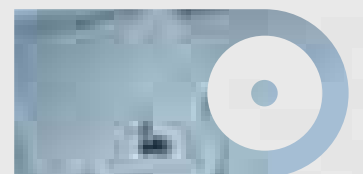
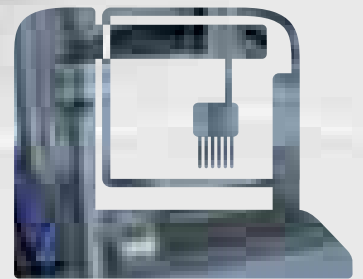


# Nanon NPC-certified cells. The optimum choice for your assays.

## PrecisIOn™ hERG-HEK

Cells from Merck Millipore, optimized for Nanion Patch Clamp Devices (NPC) Port-a-Patch, Patchliner and SyncroPatch96.



- Assay optimized for Nanion APCs
- Giga Ohm seals
- High success rates
- Stable current responses
- Cell line and assay support
- Optimized patch clamp solutions

NPC - certified cells

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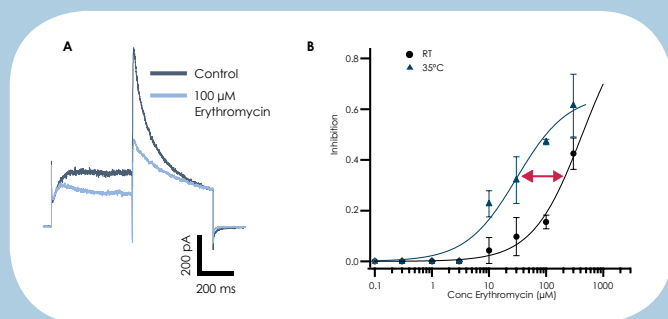
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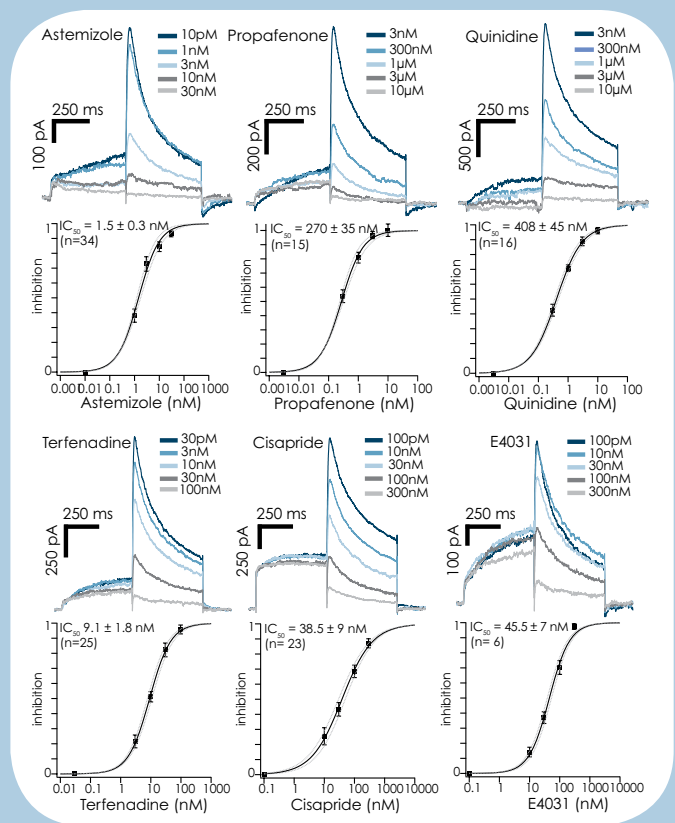
### Nanion NPC-certified hERG-HEK cells

The hERG gene (KCNH2) encodes a K<sup>+</sup> ion channel responsible for the repolarizing IKr current in the cardiac action potential. Given the importance of this channel in maintaining cardiac function, it has become an important target in compound safety screening.

Compounds can display different properties or different potencies at physiological temperature (35°C) vs. room temperature (RT). Therefore, it is of advantage to be able to study this channel electrophysiologically at elevated temperature as shown below.



**A** hERG inhibition of Erythromycin at 35°C as recorded in hERG-HEK cells. **B** CRCs for erythromycin at room temperature and at 35°C. Erythromycin is approximately 10-fold more potent at 35°C compared with RT. Recordings were done on a Patchliner.



Raw data traces and CRCs as obtained from hERG expressing hERG-HEK cells.

### hERG-HEK from Merck Millipore

<b>Passage stability:</b>	> 30
<b>Current amplitude / cell:</b>	919 ± 57 pA (n=54)
<b>IC<sub>50</sub>s:</b>	Astemizole, IC <sub>50</sub> =1.5 nM (n=34); Propafenone IC <sub>50</sub> =270 nM (n=15); Quinidine IC <sub>50</sub> =408 nM (n=16); Terfenadine IC <sub>50</sub> =9.1 nM (n=25); Cisapride IC <sub>50</sub> =38.5 nM (n=23); E4031 IC <sub>50</sub> =45.5 nM (n=6); Flunarizine, IC <sub>50</sub> =163.7 ± 19 nM (n=3) Erythromycin IC <sub>50</sub> @ RT= 427.5 μM (n=12), Erythromycin IC <sub>50</sub> @ 35°C = 30.7 μM (n=18);
<b>Seal resistance:</b>	1.3 ± 0.7 GΩ
<b>C<sub>slow</sub>:</b>	7.0 ± 1 pF (n=16)
<b>Rs:</b>	7.5 ± 1 (n=16)
<b>Cell stability after harvesting:</b>	~ 4 hrs
<b>Average whole cell stability:</b>	~ 45 min
<b>Successful whole cell recordings:</b>	70 - 90 %
<b>Application directly from frozen stock:</b>	yes

NPC-certified cells. The optimum choice.