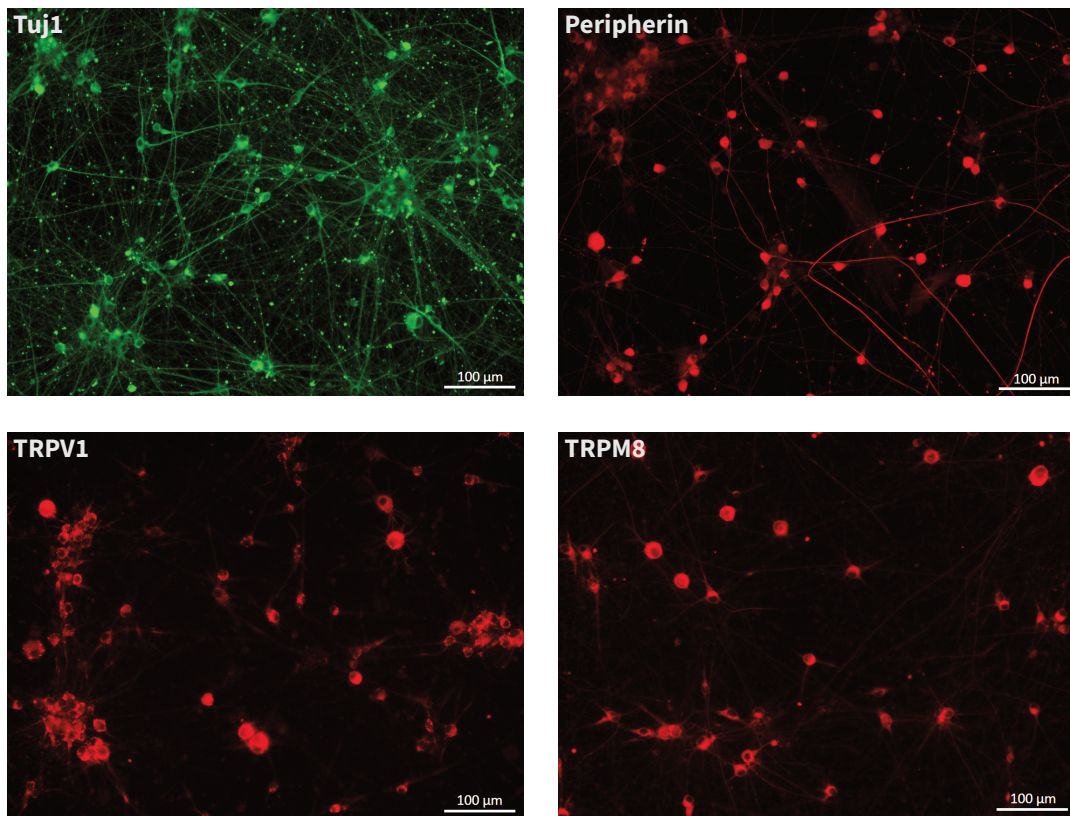


iPSC-derived Neurons for Disease Modeling and Drug Screening

Sensory neurons transmit pain signals generated by trauma, temperature, or chemicals to the central nervous system. Primary afferent nerves, evoked by non-nociceptive and nociceptive stimuli, reside in the dorsal root ganglion (DRG) of the spinal cord. REPROCELL has developed an alternative sensory neuron model using human-derived induced pluripotent stem cells (iPSCs) to negate accessibility issues and improve ease of culture. These cells express sensory markers and were detected by immunocytochemistry. Multi-Electrode Array (MEA) analysis confirms these human iPSC-derived sensory nerves display the same functionality as primary DRG cells.

Figure 1: Immunofluorescence staining day 28 after thawing and seeding sensory neurons. TuJ1: mature neural marker; Peripherin: a peripheral neuron marker; TRPV1: capsaicin receptor; TRPM8: menthol receptor.



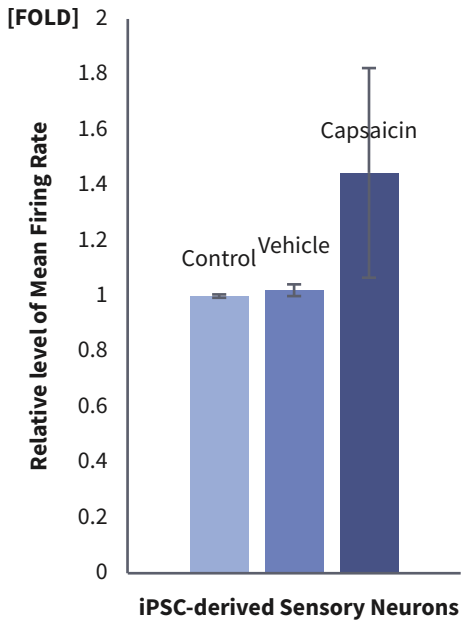


Figure 2: Response of iPSC-derived sensory neurons to capsaicin. MEA assays show that REPROCELL Stemgent StemRNA Sensory Neurons respond to the sensory stimulant capsaicin. Cortical neurons do not respond (data not shown).

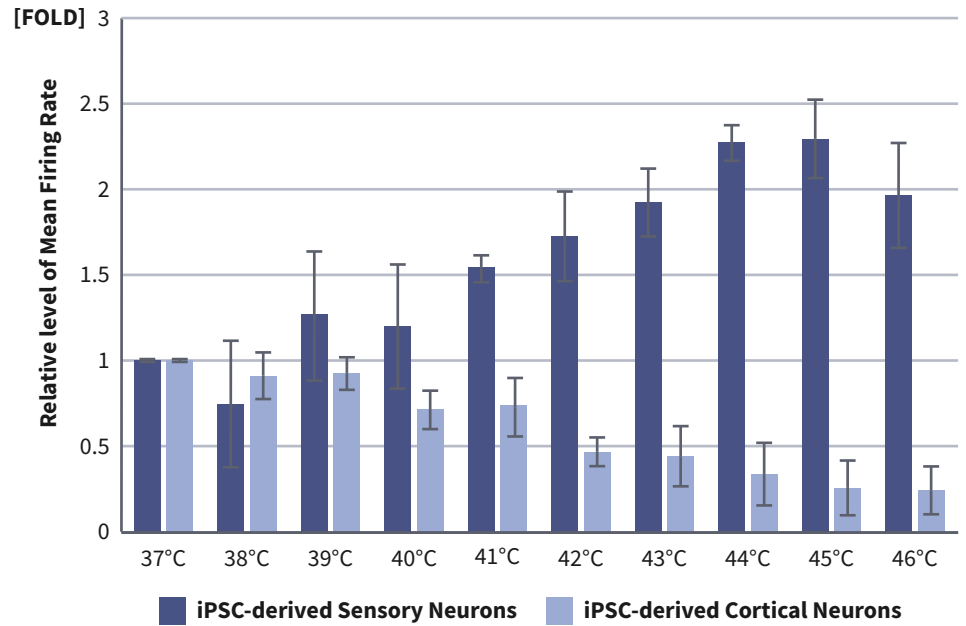


Figure 3: Temperature response of iPSC-derived sensory neurons, compared to iPSC-derived cortical neurons, showing an intact temperature activation system on the sensory neurons.

Ordering Information

Product Name	Catalog Number	Pack size
StemRNA™ Sensory Neurons	RCDN004N	1 × 10 ⁶ cells
Sensory Neuron Culture Medium	RCDN103	40 mL

