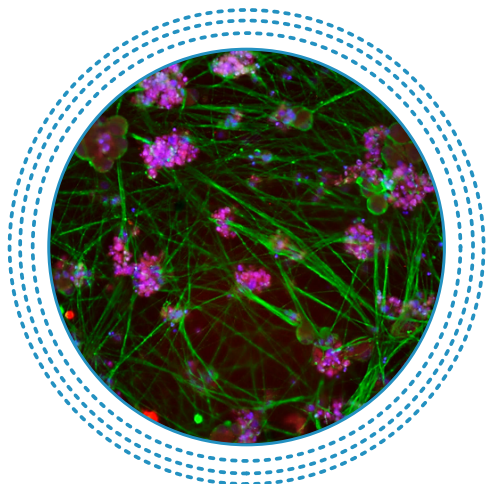


Human iPSC-Derived Sensory Neurons



Our iPSC-derived sensory neurons express the neuronal sodium ion channel Nav1.7 and the DRG-specific, TTX-resistant channels, Nav1.8 and Nav1.9 as well as the temperature-sensitive, TRPV1 and TRPM8, and TRPA1, the sensors of pungency, bitterness and cold.

Axol iPSC-Derived Sensory Neuron Progenitors are available in large batch sizes for reliable and consistent results in high-throughput screening assays. The cells are also suitable for investigating disorders of the peripheral nervous system and chronic pain.

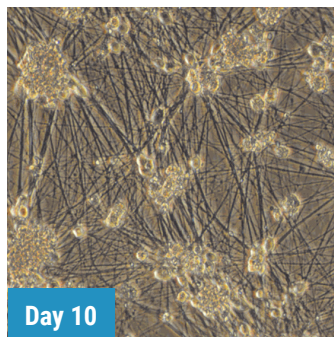
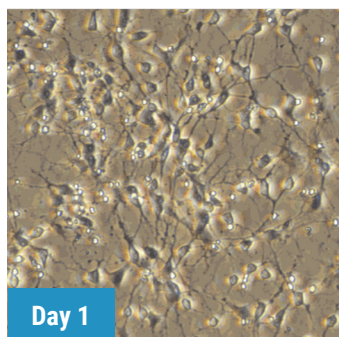
Human iPSC-Derived Sensory Neurons

PRODUCT CODE	PRODUCT NAME	DONOR	STARTING MATERIAL	QUANTITY
ax0055	Human iPSC-Derived Sensory Neuron Progenitors	Male, newborn	Cord blood CD34+ cells	500,000 cells per vial
ax0555	Human iPSC-Derived Sensory Neuron Progenitors	Male, newborn	CD34+ cells	3.2M cells per vial

Sensory Neuron Culture Media and Reagents

PRODUCT CODE	PRODUCT NAME	QUANTITY
ax0058	Sensory Neuron Maturation Maximizer Supplement	1 x 1mL vial
ax0060	Sensory Neuron Maintenance Medium	250 mL

Accelerated Maturation with our Maximizer Supplement



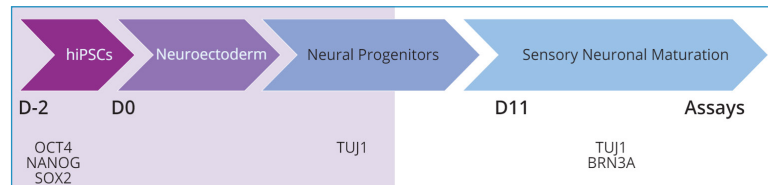
Our Maturation Maximizer media supplement ensures our iPSC-derived sensory neurons mature faster than those cultured in our normal maintenance media.

It works by mimicking in vivo signals between sensory neurons and their supporting cells. The supplement contains signaling factors present in the peripheral nervous system and in particular the native environment of sensory neurons. Utilizing this supplement accelerates the maturation of iPSC-derived sensory neurons in vitro.

Custom Sensory Neuron Differentiation

In addition to our cryopreserved stock we offer a custom differentiation process to generate human iPSC-derived sensory neurons that fulfill your R&D requirements (Figure 1).

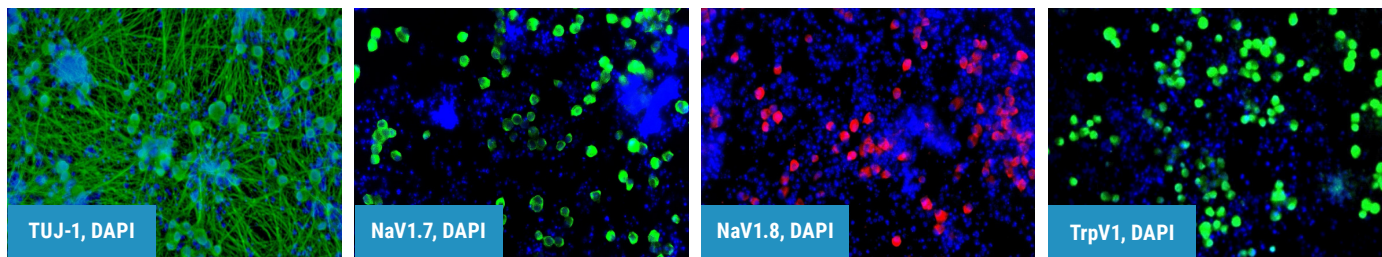
Figure 1. Schematic of the differentiation process to produce Sensory Neurons.



Significantly Increased Key Marker Expression

Culturing our sensory neuron progenitor cells with our Maximizer supplement speeds up maturation. On average we see increases of 30-45% of neurons expressing TRPv1, Nav1.7 and Nav1.8 in week 4 of culture (Figure 2).

Figure 2. Immunocytochemistry staining for Sensory Neuronal markers.



Sensory Neurons are Functionally Mature

Using the Maximizer supplement accelerates functional maturity, and ~90% of neurons are sensitive to capsaicin by day 22 of culture. They also respond to other pharmacological and physical stimuli such as mustard oil, menthol and temperature change (Figure 3).

Figure 3. MEA recordings show neuronal responses to sensory stimuli.

