

# MotorPlate™ Human ESC-derived Motor Neuron Progenitors

Get Your Translational Research Moving



Current methods for the isolation and culture of primary motor neurons can be described as difficult and tedious at best. Lonza and California Stem Cell, Inc., leaders in primary cell and stem cell biology, have teamed together to bring the first commercially available human motor neuron products to market.

These exciting new products, derived from human embryonic stem cells, are functional, adherent motor neuron progenitors seeded in plates and shipped to customers fresh and ready-to-use.

#### ■ Specifications – Standard and Mature

- >75% positive for Neuronal Class III  $\beta$ -Tubulin (TUJ1)
- >30% of Neurofilament (SMI32) – mature only
- <15% of Glial Fibrillary Acid Protein (GFAP)

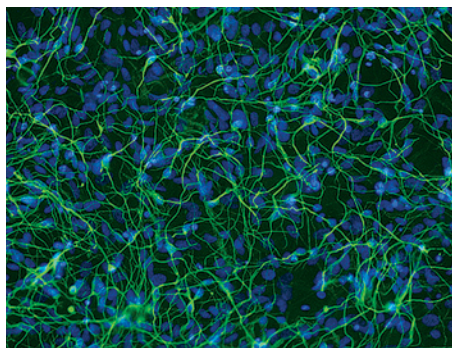
#### ■ Benefits

- Pure human motor neurons; no species extrapolation necessary
- Available in large quantities with minimal lot-to-lot variation
- Pre-plated and ready-to-use
- Shipped with optimized MotorBlast™ Culture Media

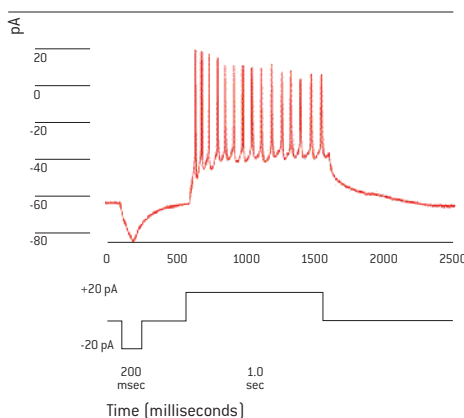
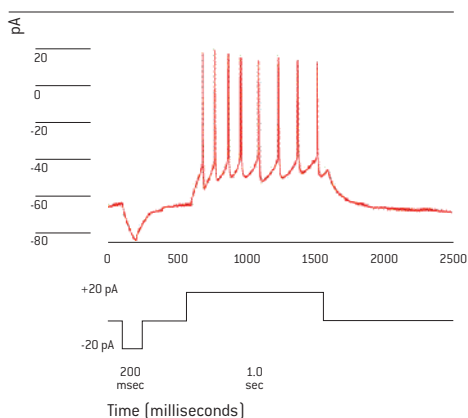
#### ■ Applications

- Viability, Toxicity, and Neuronal Outgrowth Assays
- Motor neuron disease research:
  - Spinal Muscular Atrophy (SMA),
  - Amyotrophic Lateral Sclerosis (ALS or Lou Gehrig’s disease),
  - Primary Lateral Sclerosis (PLS),
  - Progressive Muscular Atrophy (PMA)

Neurology and drug discovery laboratories have traditionally relied on rodent models for motor neuron function and disease research. No longer will researchers have to solely rely on rat and mouse models and perform challenging cross-species extrapolation. Using proprietary differentiation and purification methods, large scale production of motor neurons is now possible. These cells exhibit uniform biological response and minimal lot-to-lot variation.



**Figure 1.** Motor Neuron Progenitors stained with TUJ1 (green), a neuron-specific marker, and counterstained with nuclear marker DAPI (blue).



**Figures 2 and 3.** Patch clamp recordings of MotorPlate™ Mature Motor Neuron Progenitors reveal characteristic motor neuron activity. Data provided by The Neurosciences Institute, San Diego, CA

## Ordering Information

Cat. No.	Description	Size
FP-6011	MotorPlate™ Standard Human ESC Motor Neuron Progenitors	96-well plate
Inquire	MotorPlate™ Standard Human ESC Motor Neuron Progenitors	384-well plate
FP-6046	MotorPlate™ Mature Human ESC Motor Neuron Progenitors	96-well plate
Inquire	MotorPlate™ Mature Human ESC Motor Neuron Progenitors	384-well plate

For more information about **MotorPlate™ Human ESC Motor Neuron Progenitors**, please contact your Lonza Sales Representative.

## Contact Information

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