**BIOCIRCUIT MEA PLATES**

**HIGH-QUALITY RESULTS WITH INDUSTRY-LEADING THROUGHPUT**

**Multiwell MEA plates**
BioCircuit microelectrode array (MEA) plates provide high-quality results together with industry-leading throughput at the lowest cost per well. Available in 24-well (16 electrodes/well) and 96-well (8 electrodes/well) formats, BioCircuit MEA plates deliver low-noise signals and bring flexibility to your cellular analysis. Due to the non-invasive nature of MEA recordings, you can monitor cellular activity for days, weeks, or months.

**Superior cell droplet placement**
Plating cells in a small droplet centered over the electrode array will conserve cells and ensure robust electrical activity near the electrodes. BioCircuit MEA plates have on-plate spotting guides in the bottom of each well that confine the cell droplet over the recording electrodes. This enables more precise cell plating with less effort. Simply position the pipette between the AccuSpot features and release the droplet to ensure a perfectly centered, rounded droplet in every well.

**THE BIOCIRCUIT ADVANTAGE**
- Industry-leading electrode count for detailed information from every well
- Accurate cell spotting every time
- Integrated, independent ground electrodes
- Conical shaped walls
- Evaporation-reducing lids
- Built-in humidity chambers
- Recording and stimulation capability for each electrode

*Base of the BioCircuit MEA 96 plate with the wells removed. On-plate spotting guides (patent pending) center the droplet over the recording electrode array, increasing plate preparation speed and accuracy.*
HIGH QUALITY MEA DATA

All excitable cell types perform well on the BioCircuit MEA plates, showing excellent coverage across all wells and the high signal-to-noise ratio Axion customers expect. Track the development of electrical activity in stem cell-derived neurons or cardiomyocytes, study disease models, or examine the effects of compound treatment on excitable cells – the possibilities are endless with BioCircuit MEA plates.

On DIV16, neurons were dosed with Picrotoxin and Phenytoin (n=8 wells per compound). Picrotoxin reduced network burst frequency and increased synchrony, while Phenytoin reduced activity and disrupted network bursting.

ENHANCE YOUR ASSAY WITH LEAP

To complement high-quality field potential signals recorded using BioCircuit MEA plates, Axion’s patent-pending Local Extracellular Action Potential (LEAP) assay allows you to record extracellular action potential waveforms from cardiomyocytes. LEAP signals enable quantification of action potential morphology and characterization of complex repolarization irregularities such as early afterdepolarizations (EADs).

MEA field potential signals recorded from iPSC-derived cardiomyocytes on DIV13 before and after dosing with Dofetilide (n=5 wells per concentration) reveal increased Field Potential Duration (FPD) and decreased depolarization spike amplitude in a dose-dependent manner. LEAP signals confirm that Dofetilide prolonged repolarization (increased APD) and induced EADs at higher concentrations.