

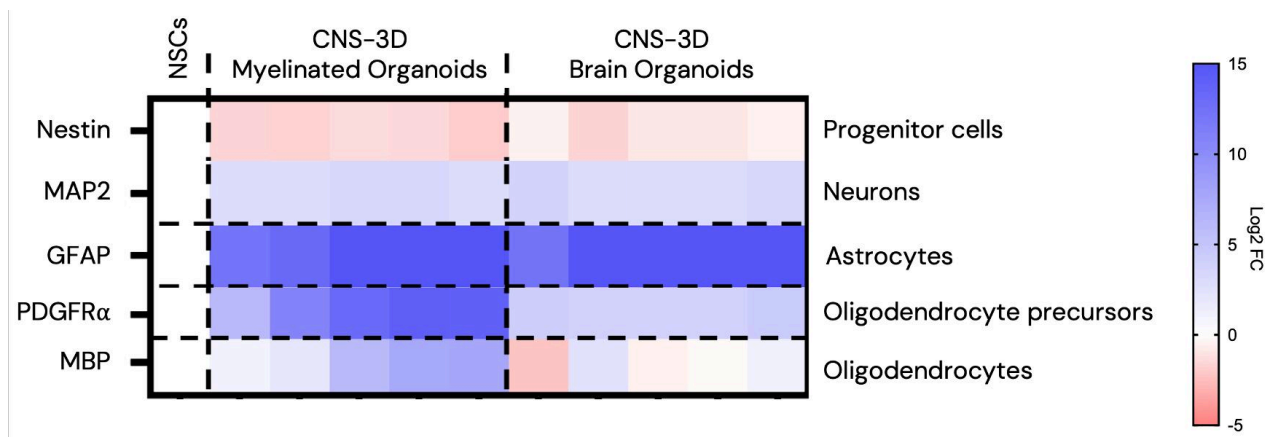
CNS-3D Myelinated Organoids

The only assay-ready myelinated organoid model to quantify myelin loss, natural recovery, and dose-dependent remyelination.

Overview

CNS-3D Myelinated Organoids are human iPSC-derived cortical organoids containing neurons, astrocytes, and oligodendrocyte lineage cells, enabling researchers to study myelin biology in a structured 3D human model. This cellular composition supports formation of myelinated axons and enables measurement of myelin dynamics alongside functional, structural, and molecular endpoints.

By capturing myelin loss, natural recovery, and therapeutic repair within the same biological context, CNS-3D Myelinated Organoids provide a human-relevant model for evaluating demyelination risk and remyelinating therapeutic efficacy. CNS-3D Myelinated Organoids are available as assay-ready products for in-house workflows or through CNS Services for end-to-end study design, execution, and analysis.



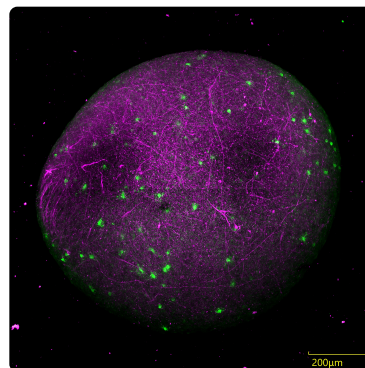
Gene expression profiling confirms presence of oligodendrocyte precursor (PDGFRα) and mature oligodendrocyte (MBP) markers in CNS-3D Myelinated Organoids relative to CNS-3D Brain Organoids, alongside preserved neuronal (MAP2) and astrocyte (GFAP) populations.

Application

Myelination

Evaluate remyelinating drug efficacy by quantifying myelin loss, recovery, and repair.

CNS-3D Myelinated Organoids enable the quantification of myelin loss, natural recovery, and drug-induced remyelination in a human context that better reflects the slower, often incomplete myelin loss and repair dynamics seen in human disease. Integrated structural, functional, and molecular endpoints reveal whether drug candidates restore myelin integrity and improve neural function.



Representative image of CNS-3D Myelinated Organoid at 12 weeks, showing neurons (NFH, magenta) and myelinating oligodendrocytes (MBP, green).

Technical Specifications

Specification	Details
Organoid Size	600–1,000 μm diameter
Cell Composition	Neurons, astrocytes and oligodendrocytes.
Assay	Multiplexed functional and molecular endpoints, including calcium imaging (e.g., FLIPR), viability (CellTiter-Glo), cytotoxicity (LDH-Glo), protein biomarker analysis (e.g., MSD, Ella), high-content imaging, and transcriptomic profiling.

Ordering Information

The only assay-ready myelinated brain organoid model to quantify myelin loss, natural recovery, and dose-dependent remyelination. Available in 96- and 384-replicate formats.

Product Name	Replicates per Plate	Plate Format	Catalog Number
CNS-3D Myelinated Organoids	96	384-well	P-C3M-96-V1
	384	384-well	P-C3M-384-V1