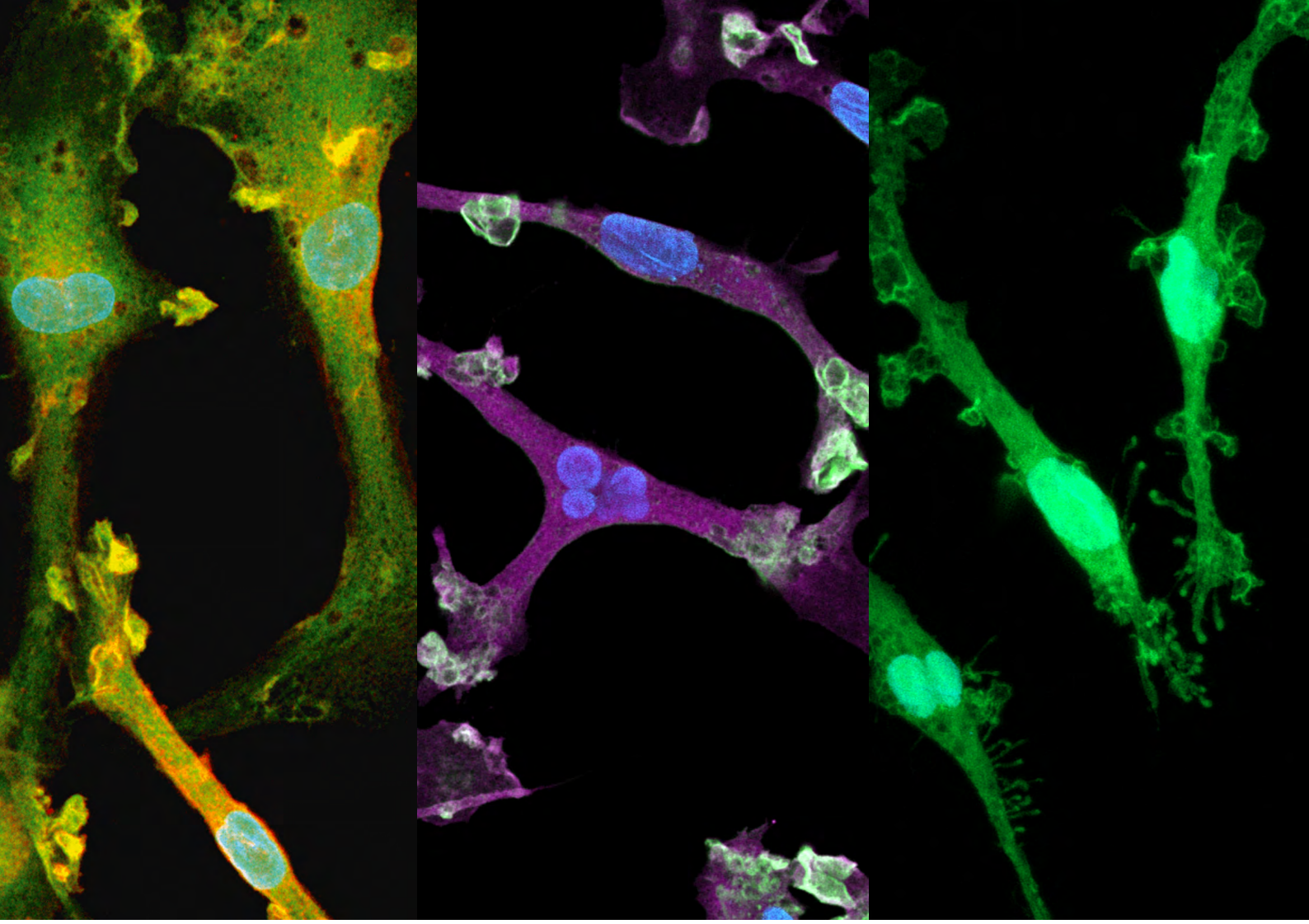


ioMicroglia Product Range

Human iPSC-derived microglia

Powered by opti-ox™

Consistent. Defined. Scalable.

- Diverse donor backgrounds
- Model Alzheimer's disease
- CRISPRko-Ready for easy gene knockouts
- Built-in fluorescence expression for co-culture tracking

View all ioMicroglia products

ioCells™

Donor background diversity

ioMicroglia Male
ioMicroglia Female

Wild-type human iPSC-derived microglia with industry-leading morphology and functionality. Different donor backgrounds provide diversity to help study neurodegenerative diseases.

Model Alzheimer's disease

ioMicroglia disease models

Alzheimer's disease-related mutations engineered in our wild-type ioMicroglia Male. Homozygous and heterozygous models are available for the following mutations:

APOE C112R | TREM2 R47H

Easy gene knockouts

CRISPRko-Ready ioMicroglia

Perform routine gene knockouts and CRISPR screens in physiologically relevant human cells constitutively expressing Cas9.

Co-culture tracking

GFP ioMicroglia

Visualise, track and isolate human microglia constitutively expressing GFP. Perfect for complex multi-cell cultures.

Benchtop benefits

FUNCTIONAL

ioMicroglia display key phagocytic and cytokine secretion functions with lot-to-lot consistency.

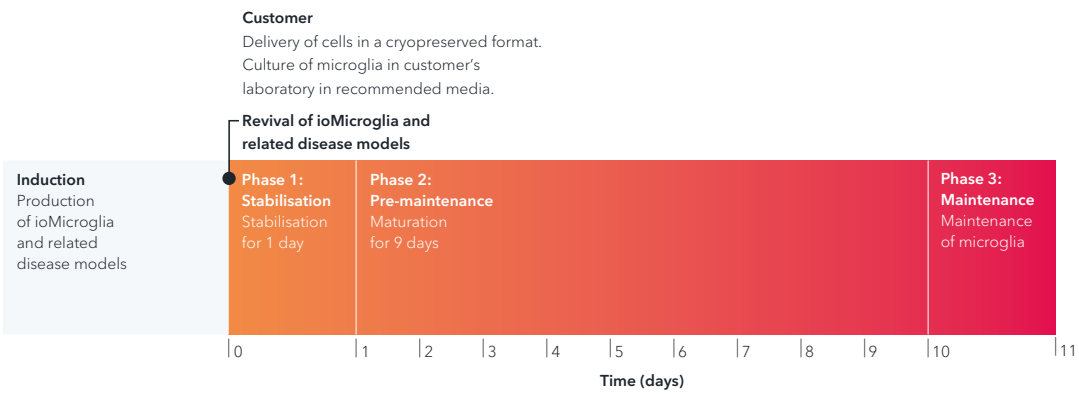
QUICK

Rapidly maturing male donor-derived human microglia that are ready to use within 10 days post-revival.

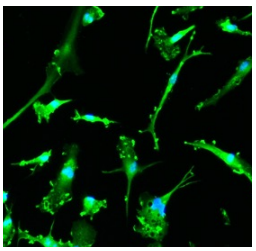
CO-CULTURE COMPATIBLE

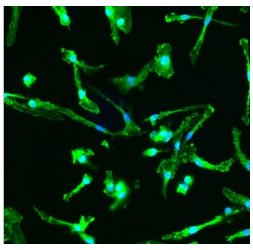
Suitable for co-culture studies with neurons at 1 day post-thaw.

Cells arrive ready to plate

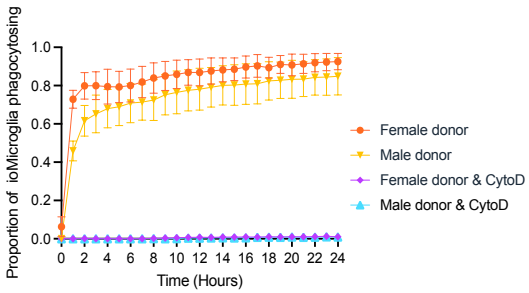


ioMicroglia display characteristic morphology and consistently perform key functionalities

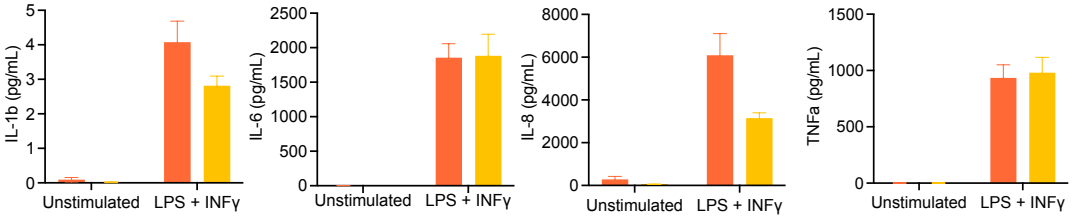




ICC of key microglia marker IBA1 Female and Male donor-derived ioMicroglia at day 10 post-thaw.



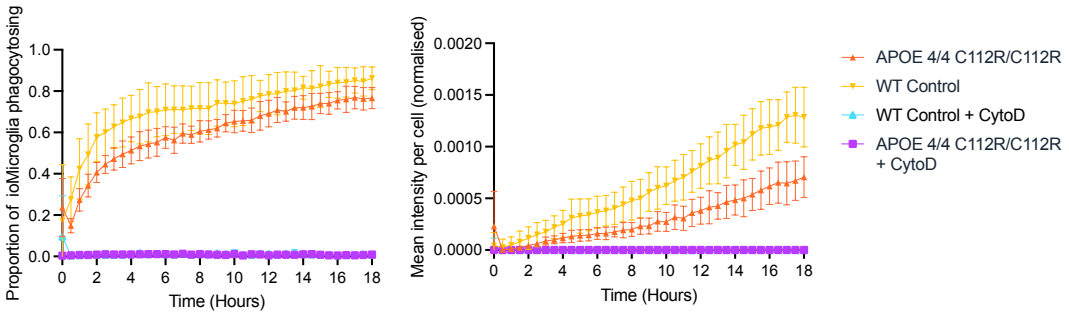
Phagocytosis of Zymosan particles by Female and Male donor-derived ioMicroglia at day 10 post-thaw.



Pro-inflammatory cytokine release 24h after stimulation with LPS and IFN of Female and Male donor-derived ioMicroglia at day 10 post-thaw.

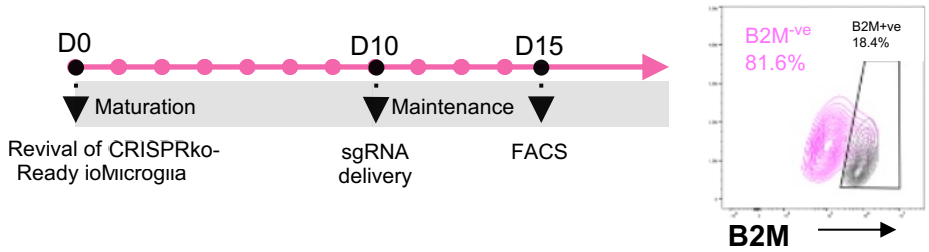
Model Alzheimer's disease with disease-related phenotypes

Reduced phagocytic activity in ioMicroglia APOE 4/4 C112R/C112R compared to their WT genetically matched control.



Perform routine gene knockouts with CRISPRko-Ready ioMicroglia

High knockout efficiency of B2M gene with lipid based sgRNA transfection at day 10 post-thaw, with a flow cytometry readout at day 15 in CRISPRko-Ready ioMicroglia.

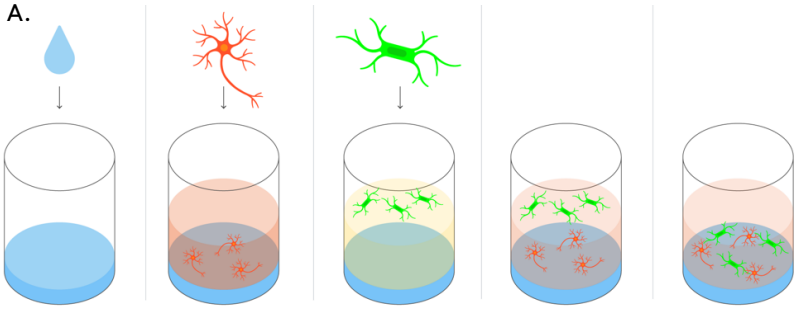


Model neurodegeneration with microglia-neuron co-cultures

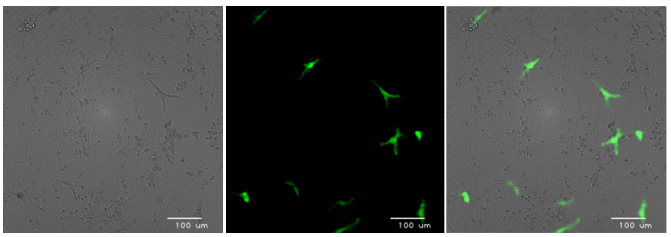
A. Easy to use co-culture protocols available. Suitable for all ioMicroglia and ioGlutatamergic Neuron products.

B. Track GFP ioMicroglia in complex multi-cell cultures with live-cell imaging.

A.



B.



Discover our range of ioMicroglia for disease modelling, CRISPR screens, live-cell imaging, multi-cell in vitro models, and studying sex-specific differences in disease mechanisms.

ioDisease Model Cells

Alzheimer's disease

ioMicroglia | Male APOE 4/3 C112R/WT
ioMicroglia | Male APOE 4/4 C112R/C112R
ioMicroglia | Male TREM2 R47H/WT
ioMicroglia | Male TREM2 R47H/R47H

CRISPR-Ready ioCells

CRISPRko-Ready ioMicroglia | Male

ioTracker Cells

GFP ioMicroglia | Male

ioWild Type Cells

ioMicroglia | Female

ioMicroglia | Male

Co-culture protocols

ioMicroglia, ioGlutamatergic Neurons and associated disease models

Mix-and-match with any cell type from our neuroscience toolkit to model the CNS

ioGlutamatergic Neurons	ioAstrocytes	ioGABAergic Neurons	ioOligodendrocyte -like cells

Who we are

bit.bio combines the concepts of cell programming and biology to provide human cells for research, drug discovery and cell therapy, enabling a new generation of medicines.

This is possible with our deterministic cell programming technology opti-ox – a gene engineering approach that enables unlimited batches of any human cell to be manufactured consistently at scale.

For general information, email info@bit.bio

To learn more, visit www.bit.bio

bit.bio
THE CELL CODING COMPANY