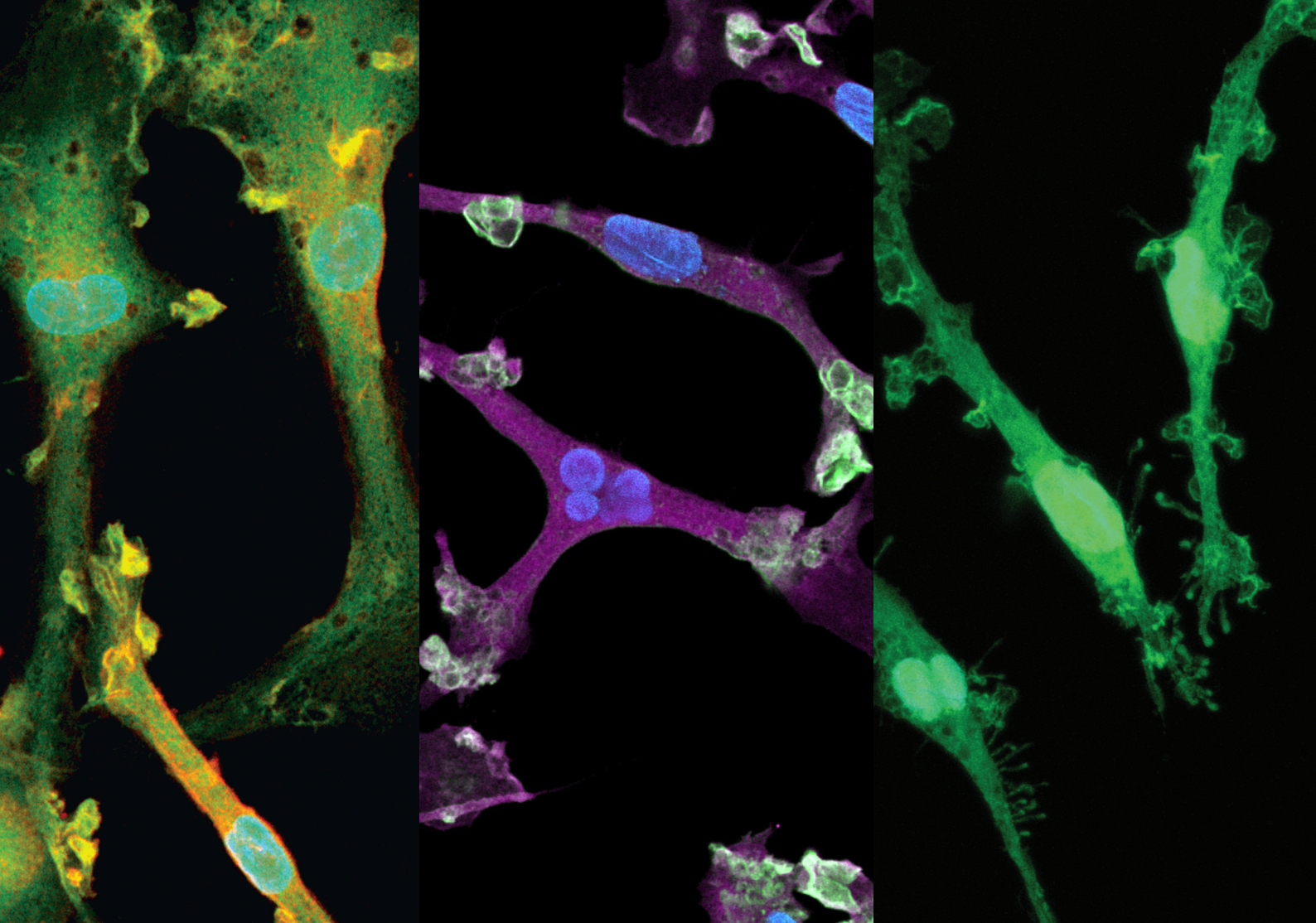




## ioMicroglia Product Range

### 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

**ioCells™**

View all ioMicroglia  
products



Donor background diversity

Model Alzheimer's disease

Simplify gene knockout, activation, and interference experiments

Co-culture tracking

Benchtop benefits

Cells arrive ready to plate

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.



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 | P2RY12



CRISPR-Ready ioMicroglia

Perform routine gene perturbations and CRISPR screens in physiologically relevant human cells constitutively expressing Cas9 nuclease or dCas9 variants.



GFP ioMicroglia

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



FUNCTIONAL

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



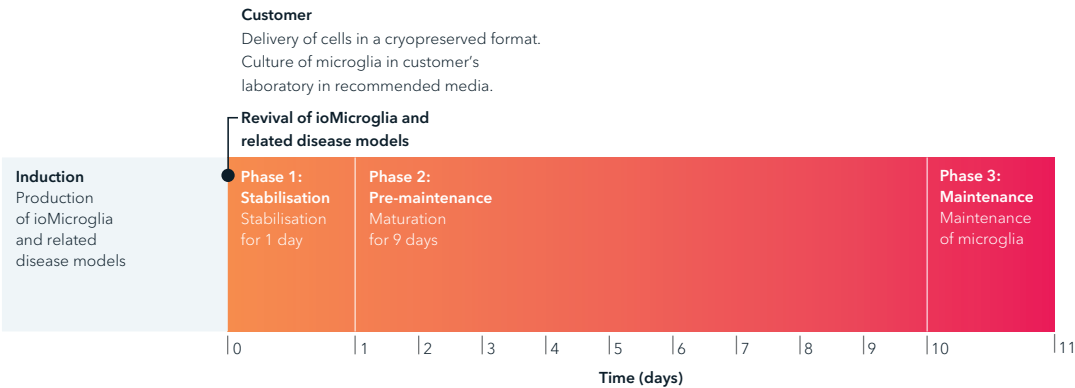
QUICK

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

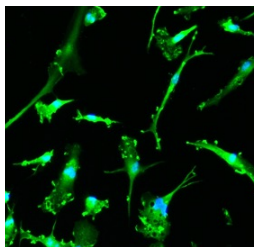


CO-CULTURE COMPATIBLE

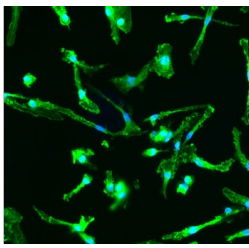
Suitable for co-culture studies with neurons at 1 day post-thaw.



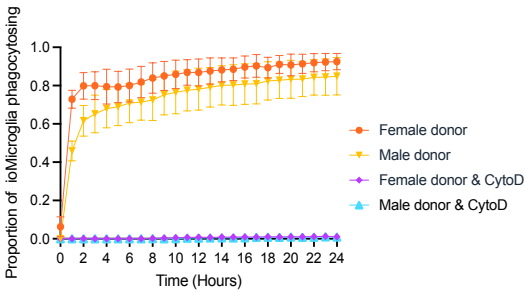
ioMicroglia display characteristic morphology and consistently perform key functionalities



Male

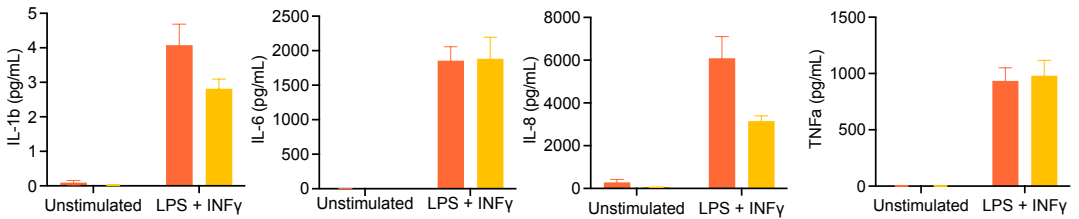


Female



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

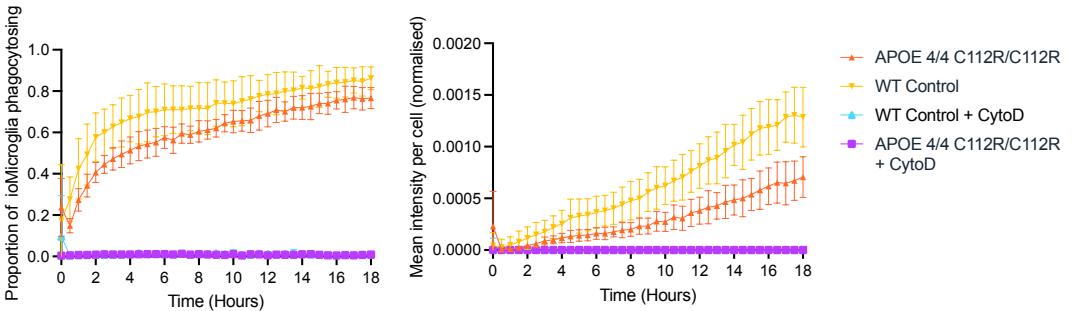
Phagocytosis of Zymosan particles by Female and Male donor-derived ioMicroglia at day 10 post-thaw.



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

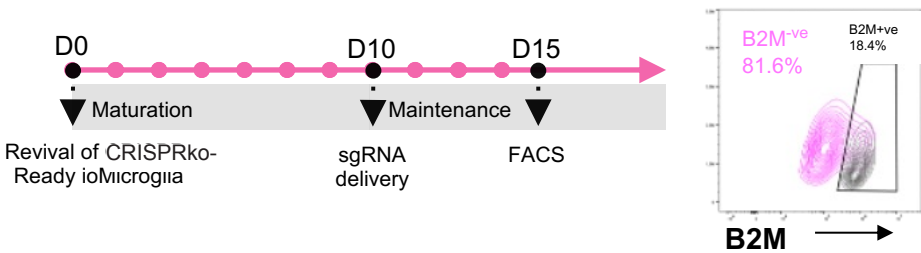
Model Alzheimer's disease with disease-related phenotypes

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



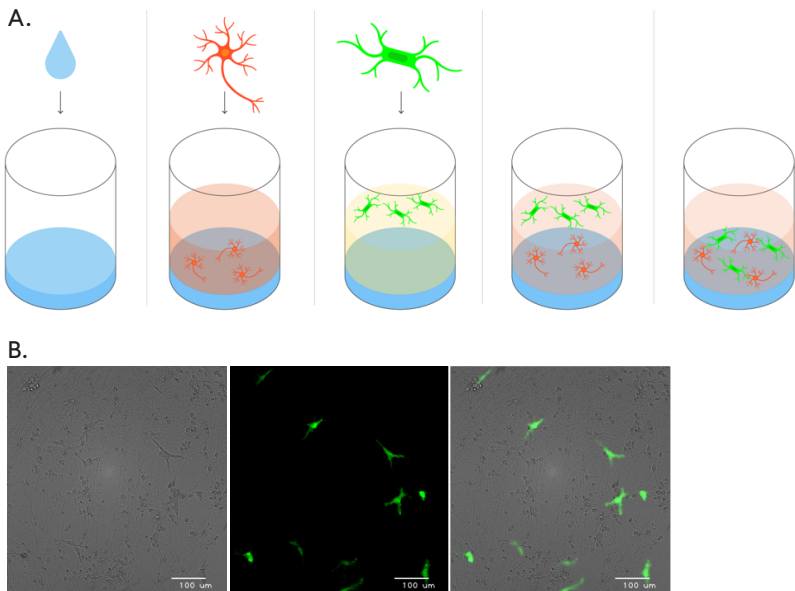
Perform routine gene knockouts with CRISPRko-Ready ioMicroglia

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



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

ioMicroglia | Male  
P2RY12 null/null

ioMicroglia | Male  
P2RY12 null/WT

ioMicroglia | Male  
GPNMB null/null

#### CRISPR-Ready ioCells

CRISPRko-Ready ioMicroglia | Male

CRISPRi-Ready ioMicroglia | Male

CRISPRa-Ready ioMicroglia | Male

#### ioTracker Cells™

GFP ioMicroglia | Male

#### ioWild Type Cells

ioMicroglia | Female

ioMicroglia | Male

#### Multi-cell culture protocols

ioMicroglia, ioGlutamatergic Neurons  
and associated disease models

ioMicroglia, ioGlutamatergic Neurons,  
ioAstrocytes

#### ioCells Media Kits – coming soon!

**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](mailto:info@bit.bio)

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