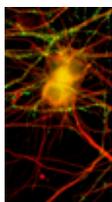


# iPSC-DERIVED HUMAN NEURONS, MICROGLIA AND ASTROCYTES

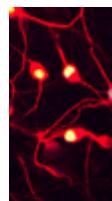
BrainXell provides high-purity, iPSC-derived human neurons and glia for research and development with a focus on drug discovery. Utilizing proprietary technology, we generate high-purity, subtype-specific neurons that mature rapidly and are quickly and easily ready for a variety of assays. Multiple neuron subtypes relevant to a range of disorders are available. Additionally, each neuron subtype here can be made in custom batches from 50 million to 10 billion neurons from unique iPSC or ESC lines. We are dedicated to delivering the highest quality products for off-the-shelf neurons and custom service projects

CELL TYPE AVAILABLE	NEURONAL PURITY	SUBTYPE PURITY	SUBTYPE MARKER	TIME TO MATURE	CATALOG #
Spinal Motor Neurons	>90%	>70%	FOXP1	5-10 days	BX-0100
Cortical Glutamatergic Neurons	>90%	>70%	FOXP2	7-14 days	BX-0300
Cortical GABAergic Neurons	>90%	>70%	GABA	7-14 days	BX-0400
Mixed Cortical Neurons	>90%	80%/20%	FOXP2/GABA	7-14 days	BX-0500
Medium Spiny GABAergic Neurons	>90%	>70%	DARPP32	7-14 days	BX-0700
Cortical Astrocytes	-	>90%	GFAP	4-7 days	BX-0600
Spinal Astrocytes	-	>90%	GFAP	4-7 days	BX-0650
Microglia	-	>90%	IBA1/PU1	4-7 days	BX-0900
Midbrain Dopaminergic Neurons	>90%	>60%	TH	7-14 days	BX-0200
Endothelial Cells	-	>90%	VE-Cadherin	4-7 days	BX-1000



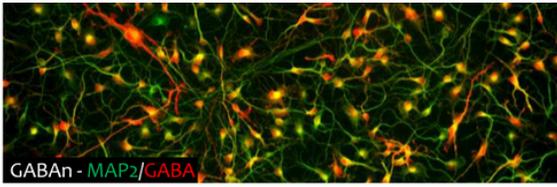
## SPINAL MOTOR NEURONS

Cholinergic neurons of a spinal cord lineage representative of lower motor neurons found in the ventral horn of the spinal cord. Fully differentiated, expressing FOXP1 and MAP2 at DIV7 with spontaneous firing by DIV14. Primary neurotransmitter released: Acetylcholine. Related diseases: ALS, SMA, Spinal Cord Injury.



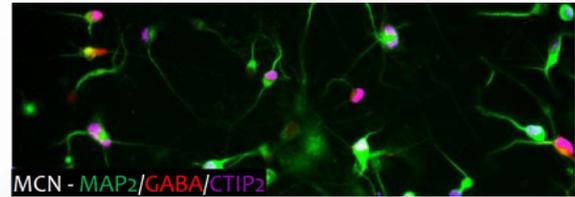
## CORTICAL GLUTAMATERGIC NEURONS

Excitatory neurons of a forebrain lineage representative of various deep layers of the cortex (Layers V and VI). Fully differentiated, expressing FOXP2 and MAP2 at DIV7 with synchronous firing by DIV21. Primary neurotransmitter released: Glutamate. Related diseases: Alzheimer's & Huntington's Disease.



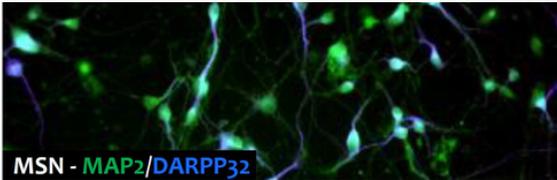
### CORTICAL GABAERGIC NEURONS

Fully differentiated, expressing GABA and MAP2 at DIV7 with synchronous firing by DIV21. Related diseases: Epilepsy, Alzheimer's, Schizophrenia Primary neurotransmitter released: GABA



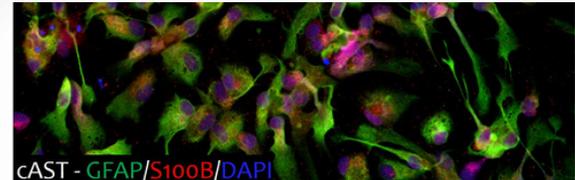
### MIXED CORTICAL NEURONS

Cortical Glutamatergic (excitatory) and GABAergic (inhibitory) neurons provided in two vials, allowing the researcher to adjust the desired ratio. Each cell type is fully differentiated, expressing representative markers at DIV 7 with spontaneous firing by DIV 14. Related diseases: AD, HD, Epilepsy, Schizophrenia.



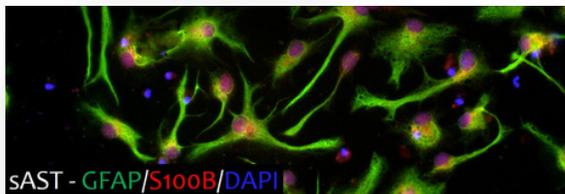
### MEDIUM SPINY GABAERGIC NEURONS

Inhibitory neurons of a striatal lineage representative of neurons found in the striatum. Fully differentiated, expressing GABA/DARPP32/MAP2 at DIV 7 with spontaneous firing by DIV 21. Primary neurotransmitter released: GABA. Related diseases: HD, PD & Schizophrenia.



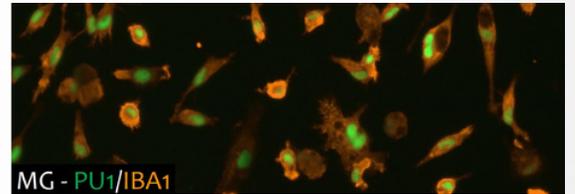
### CORTICAL ASTROCYTES

Energy and structural support glial cell from a forebrain lineage. When co cultured with neurons, neurite outgrowth and synaptic firing is improved. Fully differentiated, expressing GFAP at DIV 7. Related diseases: Autism, Epilepsy, AD, HD



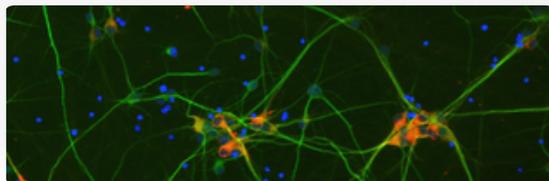
### SPINAL ASTROCYTES

Energy and structural support glial cell from a spinal cord lineage. Exhibit earlier and higher levels of synchronous firing when co-cultured with spinal motor neurons. Fully differentiated, expressing GFAP at DIV 7. Related diseases: ALS, SMA, Spinal Cord Injury.



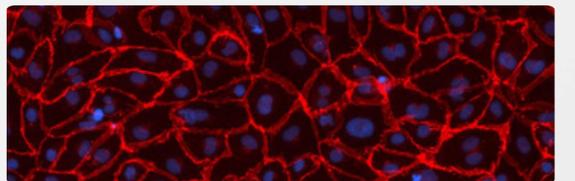
### MICROGLIA

Major immune cell in the central nervous system, generated via a hematopoietic progenitor lineage. Microglia clear dead neurons, degenerating synapses, myelin debris and amyloid beta via phagocytosis, and . Fully differentiated, expressing PU1 and IBA1 at DIV 7. Related diseases: Autism, Epilepsy, AD, HD



### MIDBRAIN DOPAMINERGIC NEURONS

Dopaminergic neurons of a midbrain lineage, fully differentiated, expressing MAP2/TH at DIV 14. Primary neurotransmitter released: dopamine. Related diseases: PD, HD, ADHD, addiction, epilepsy, schizophrenia



### ENDOTHELIAL CELLS

Innermost lining of blood vessels. Fully differentiated, expressing VE-Cadherin with tight junctions at DIV 7. ECs form vascular tubes and uptake AC-LDL. Related diseases: Hypertention, diabetes, AD, arthritis.

Our comprehensive range of products offers the precision and reliability necessary to advance their investigations into the complexities of the brain. From top-tier neural cells to specialized culture media, BrainXell equips researchers with the tools essential for groundbreaking discoveries.

**Get in Touch**

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