



A new EBiSC iPSC-derived neuronal cell product simplifies neuroscience research

The possibility to generate an unlimited amount of mature and functionally active neurons from human-induced pluripotent stem cells (iPSCs) has the potential to radically accelerate neuroscience research. However, differentiation protocols can be lengthy, expensive, and often produce inconsistencies in terms of yield and functionality. The European Bank for induced Pluripotent Stem Cells ([EBiSC](https://ebisc.org)) is happy to announce a new iPSC derived neuronal cell product - EBiSC-NEUR1 which can be used directly from thaw for downstream applications.

“Making pre-differentiated neurons from the healthy BIONi010-C-13 lines, available via the EBiSC catalogue as a standard offering is a step forward for iPSC researchers worldwide,” explains Dr. Christian Clausen, CSO of Bioneer A/S, the RTO responsible for generating the original iPSC line and developing the differentiation protocol. *“Issues with reproducibility and inconsistencies in differentiation are a real stumbling block for those not familiar with how to generate and handle iPSC-neurons. Now EBiSC has removed this challenge by making the cells plus a User protocol available for a non-profit transfer fee, to all researchers.”*

EBiSC-NEUR1 cells are early neurons derived using a doxycycline-inducible NGN2 expression system within a healthy male iPSC line. The transcription-factor based differentiation approach accelerates generation of mature neurons while reducing cell culture variability. EBiSC-NEUR1 neurons can be thawed directly onto either mouse or human astrocytes for co-culture, showing robust viability and recovery, consistent neuronal morphology, phenotype, and functionality.

EBiSC-NEUR1 cultures exert a great homogeneity with low batch-to-batch variability providing an ideal starting point for diverse co-culture approaches as well as large-scale assays and high-throughput drug screenings. EBiSC-NEUR1 can be accessed via the non-profit EBiSC catalogue (<https://ebisc.org/EBiSC-NEUR1>).

The EBiSC catalogue is in constant expansion and will continue collecting iPSC lines associated with various disorders as well as offering iPSC related services and providing future additional cell products representing different cell types and lineages.

Notes to the editor:

The European Bank for induced pluripotent Stem Cells (EBiSC) is a centralised, not-for-profit iPSC bank providing researchers across academia and industry with access to scalable, cost-efficient, and consistent, high-quality tools for new medicines development. Learn more at ebisc.org and search the EBiSC catalogue at cells.ebisc.org. Follow the EBiSC journey on Twitter [@EBiSC_cells](https://twitter.com/EBiSC_cells) and EBiSC's LinkedIn <https://www.linkedin.com/company/EBiSC> and subscribe here to receive detailed EBiSC news by mail.

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Related publications:

[Generation of two gene edited iPSC-lines carrying a DOX-inducible NGN2 expression cassette with and without GFP in the AAVS1 locus](#). Stem Cell Research, 52 (2021)

[Development of a fully human assay combining NGN2-inducible neurons co-cultured with iPSC-derived astrocytes amenable for electrophysiological studies](#). Stem Cell Research, 54 (2021)

[Scalable expansion of iPSC and their derivatives across multiple lineages](#). Reproductive Toxicology 112 (2022)

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EBiSC Press Contacts:

Tanja Oster, EBiSC2 Project Office at ebisc2@eurtd.com | Contact@EBiSC.org