Serum-Free Medium for Neural Stem Cell KBM Neural Stem Cell

Developed and Commercialized with Professor Hideyuki Okano, MD, PhD, Department of Physiology, Graduate School of Medicine, Keio University

<u>Overview</u>

This medium is specialized for the neurosphere assay which is widely applied research and development regarding neural stem cells (NSCs) and neural cells. By adding KBM Neural Stem Cell Supplement to this medium and proceeding suspension culture, it is capable of culturing NSCs as neurospheres. Cultured neurospheres can produce new neurospheres by dispersing cells and reculturing. It is also capable of inducing differentiation of NSCs into neural cells by adherent cell cultures of neurospheres, without addition of supplement.

<u>Characteristics</u>

- Serum-free and chemically-defined
- Capable of both undifferentiated proliferation and inducing differentiation of NSCs.
- Confirmed the capability to culture NSCs derived human iPS cells.

Cell Culture Example

(a) PDT variation at passages of NSCs(c) Picture of cultured neurospheres

(b) Total number of NSCs at passages(d) Picture of differentiated neurons



[Passage Culture Assay]

 Culture medium

 KBM Neural Stem Cell

 +KBM Neural Stem Cell Supplement

 Cell culture vessel

 6 well cell culture plate (corning 3471)

 Protocols

 Cells were seeded at 1×10⁵ cells/mL, and passaged every 5 days.

[Differentiation Induction Assay]

 Culture medium

 KBM Neural stem cell

 Cell culture vessel

 Cell culture cover glass

 Poly-L-ornithine coating

 Protocols

 Neurospheres were seeded

 and cultured for 5 days.

[Antibodies] Green∶anti-6 tublin Ⅲ Blue∶anti-GFAP Red∶anti-CNPase

Product No.	Product Name	Size	Shelf Life	Storage
16050100	KBM Neural Stem Cell	500 mL	1 year **	-20°C
16050200	KBM Neural Stem Cell Kit *	-	1 year **	-20°C
16050300	KBM Neural Stem Cell Supplement	1mL	1 year **	-20°C
16050200 16050300	KBM Neural Stem Cell Kit * KBM Neural Stem Cell Supplement	- 1mL KBM Neural Ste	1 year ** 1 year ** om Cell and KBM	-20°C -20°C Neural Ste

* made up of KBM Neural Stem Cell and KBM Neural Stem Cell Supplement ** from production date



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