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Astrocyte differentiation kit (Qk520)

Type: Growth factor discovery kits

Available for purchase: Qk520: Astrocyte differentiation kit

Buy online with secure credit card or purchase order.

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Product Information

For the differentiation of induced pluripotent stem cells into astrocytes.

Astrocytes are the most abundant glial cells in the human central nervous system and are essential for maintaining healthy brain function. They regulate neurotransmitter uptake, ion and metabolic homeostasis, synaptic activity, and blood–brain barrier integrity, while also contributing to neuroimmune signaling, inflammation, injury response, and neuronal survival.

The kit includes carefully optimized growth factors required to efficiently guide iPSCs toward astrocytes.

Species reactivity

- human

Product Information

- >98%, by SDS-PAGE quantitative densitometry
- Animal origin-free (AOF) and carrier protein-free
- Expressed in *E. coli*
- Bioactivity Guaranteed
- Manufactured in our Cambridge, UK laboratories
- Lyophilized

Reconstitution instructions

- Discovery kits

Featured applications

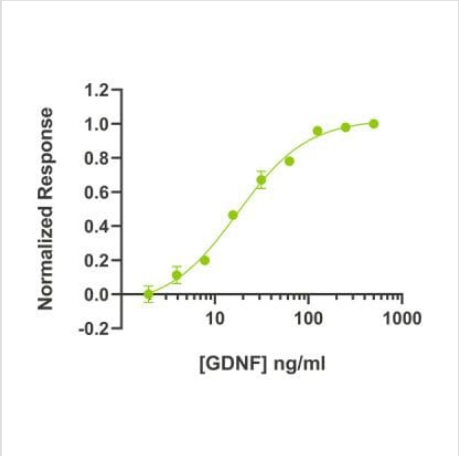
- Differentiation of induced pluripotent stem cells to astrocytes

Further quality assays

- Mass spectrometry: single species with expected mass
- Recovery from stock vial: >95%
- Endotoxin: <0.05 EU/µg protein

Scientific Information

Bioactivity



Human noggin - Qk034 - **50 µg**

Noggin is used in the culture of intestinal, pancreatic, lung and tumor-derived organoids and the maintenance of undifferentiated embryonic stem cells (ESC) and for stem cell differentiation into neural and microglial lineages.

FGF2-G3 145 aa - Qk052 - **50 µg**

A thermostable engineered form of FGF-2. FGF2-G3 145 aa is the 145 aa active domain of FGF-2 with the functional half-life increased from <10 h (wild-type) to >7 days (FGF2-G3).

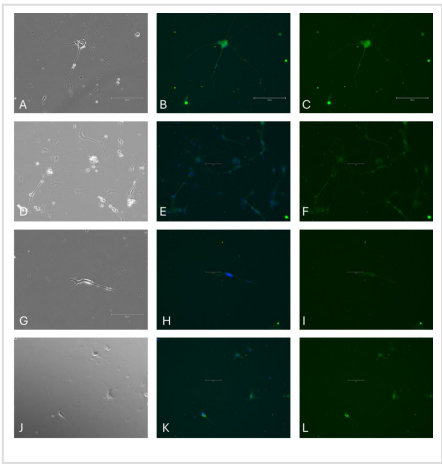
Human EGF – Qk011 - **100 µg**

Potent EGF-family growth factor used in many human and mouse organoid and stem cell culture systems including intestinal and tumor organoid culture.

Human CNTF - Qk063 - **25 µg**

Used to culture primary neurons and glial cells such as astrocytes and Schwann cells. It is also used to culture retinal cells and adipocytes.

Purity



Immunocytochemistry of astrocyte markers in differentiated iPSCs. Phase contrast image (A); GFAP & Hoechst 33258 (green expression & blue expression, B); GFAP (green, C); Phase contrast image (D); ALD1L1 & Hoechst 33258 (green expression & blue expression, E); ALD1L1 (Green, F); Phase contrast image (G); EAAT1 & Hoechst 33258 (green expression & blue expression H); EAAT1 (green, I). Phase contrast image (J); EAAT2 & Hoechst 33258 (green expression & blue expression, K); EAAT2 (green, L). Scale bar = 150 µm. iPSC differentiated using the astrocyte differentiation kit (Qk520).

Application note | Differentiation of induced pluripotent stem cells (iPSCs) into astrocytes

Original product page: https://ryan.calliope-alpha.ts.net/product/astrocyte-differentiation-kit-qk520/

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