Retrovirus iPSC Reprogramming Kit Protocol

Cat Number: RF101

Descriptions

Human induced pluripotent stem cells (iPSCs) can be derived from somatic cells through a reprogramming process driven by ectopic expression of a defined set of reprogramming factors: Oct4, Sox2, Klf4 and c-Myc. These hiPSCs share the properties of self-renewal and pluripotency with human ES cells, and can therefore be used as a renewable source for all differentiated cell types of the body.

Human iPSCs can be generated from patients of virtually any genetic background. Retroviruses are efficient tools for delivering heritable genes into the genome of dividing cells. The VSV-G pseudotyped retrovirus has a wide range of targets including both mammalian and non-mammalian cells, and are usually silenced in ES cells. The retrovirus is commonly used in generating iPSCs because of its high reprogramming efficiency. The Human iPS Cell Reprogramming Retrovirus Kit offers such opportunity to generate iPSCs from various tissues and cell types.

Highlights

- Highly efficiency and stable reprogramming method
- Flexible in source cell selection
- Optimized for feeder-free reprogramming
- Addition of small molecules are not required

Specifications

Product Name	Retrovirus iPSC Reprogramming Kit
Catalog #	RF101
Content	Retrovirus cocktail containing: human Oct4 retrovirus (cat# RF01O) 2 vials, 20 µl each human Sox2 retrovirus (cat# RF01S) 2 vials, 20 µl each human Klf4 retrovirus (cat# RF01K) 2 vials, 20 µl each human c-Myc retrovirus (cat# RF01M) 2 vials, 20 µl each GFP retrovirus (cat# RF01G) 1 vial, 20 µl each TransPlus virus transduction enhancer (cat# V020) 1 vial, 100 µl
Shipping	Dry Ice

Storage and Stability	Store at -80 °C. This product is stable up to 6 months when stored as directed.
Quality Control	Each lot of Human iPS Cell Reprogramming Retrovirus Kit is tested for sterility and successful reprogramming.
Restricted Use	For Research Use Only. Not for use in diagnostic or therapeutic procedures.

Related Products and Services

- Episomal iPSC reprogramming kit (Cat# RF202)
- EZStem Gelatin (Cat# M500)
- EZStem stem cell dissociation solution (Cat# M100)
- EZStem stem cell freezing medium (Cat# M050)
- Human iPSC cell line (Cat# iPS11)
- Custom iPSC Generation Service

Scientific Resources

Overview

Human induced pluripotent stem cells (iPSCs) can be derived from somatic cells through a reprogramming process driven by ectopic expression of a defined set of reprogramming factors: Oct4, Sox2, Klf4 and c-Myc. These hiPSCs share the properties of self-renewal and pluripotency with human ES cells, and can therefore be used as a renewable source for all differentiated cell types of the body. Human iPSCs can be generated from patients of virtually any genetic background.

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Publications

Hsieh WC, Ramadesikan S, Fekete D, Aguilar RC. *PloS one*. 2018;13:e0192635