

Product Components List

Cellartis® iPSC CRISPR/Cas9 Gesicle and Single-Cell Cloning System

Catalog No.	Amount
632642	1 system

Description

The Cellartis iPSC CRISPR/Cas9 Gesicle and Single-Cell Cloning System is a complete system that allows efficient, footprint-free gene editing of human induced pluripotent stem cells (iPSCs) via gesicle delivery of a Cas9/sgRNA complex, followed by successful clonal expansion of single, edited human iPSCs. Importantly, this system maintains karyotype and pluripotency during the whole editing process.

Gesicles are cell derived nanovesicle carrying the Cas9/sgRNA ribonucleoprotein complex (RNP). Gesicles are produced in a Gesicle Producer 293T Cell Line (Cat. No. 632617) via co-overexpression of packaging mix components, which include a nanovesicle-inducing glycoprotein and a protein that is displayed on the cell surface that mediates binding and fusion with the cellular membrane of target cells. Simultaneous expression of Cas9 protein from *Streptococcus pyogenes* and a target-specific guide RNA (sgRNA), results in incorporation of the Cas9/sgRNA complex within the gesicles. After the resulting Cas9/sgRNA gesicles are harvested and applied to your iPSCs in the presence of protamine sulfate, they will efficiently enter the cells and mediate gene editing.

This system provides the components needed to clone and express your target-specific guide RNA, and packaging reagents to produce CRISPR/Cas9 gesicles. It is essential to use the pGuide-it-sgRNA1 Vector for expression and packaging of your guide RNA, since using other commonly used guide RNA vectors will not result in effective Cas9/sgRNA complexes.

This system also contains Cellartis DEF-CS™ 500 Basal Medium (Cat. No. Y30011), Cellartis iPSC Single-Cell Cloning DEF-CS COAT-1 (Cat. No. Y30018), and Cellartis iPSC Single-Cell Cloning DEF-CS Additives (Cat. No. Y30019), which are all also included in the Cellartis iPSC Single-Cell Cloning DEF-CS Culture Media Kit (Cat. No. Y30021)—a defined culture system for efficient single-cell cloning and expansion of edited human pluripotent stem cell clones.

Package Contents

- Cellartis DEF-CS 500 Basal Medium (Cat. No. Y30011) (Not sold separately) >> [View Components](#)
- Cellartis iPSC Single-Cell Cloning DEF-CS Additives (Cat. No. Y30019) (Not sold separately) >> [View Components](#)
- Cellartis iPSC Single-Cell Cloning DEF-CS COAT-1 (Cat. No. Y30018) (Not sold separately) >> [View Components](#)
- Guide-it™ CRISPR/Cas9 Gesicle Packaging Set (Cat. No. 632616) (Not sold separately) >> [View Components](#)
- Guide-it Ligation Components v2 (Cat. No. 632615) (Not sold separately) >> [View Components](#)
- pGuide-it-sgRNA1 Vector (Linear) (Cat. No. 632614) (Not sold separately) >> [View Components](#)
- Stellar™ Competent Cells (Cat. No. 636763) >> [View Components](#)

For storage conditions, please see the Certificate of Analysis supplied with each component.

Takara Bio USA, Inc.

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Product Documents

Documents for our products are available for download at takarabio.com/manuals

The following documents apply to this product:

- Cellartis iPSC CRISPR/Cas9 Gesicle and Single-Cell Cloning System User Manual
 - Cellartis iPSC Single-Cell Cloning DEF-CS Culture Media Kit User Manual
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Notice to Purchaser

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This document has been reviewed and approved by the Quality Department.