Human T Cell Depletion Kit - CR

REF 13510-232CR
Document Number
UG13510232CRA02

Kit Contents:

QTY 50 mL Human T Cell Depletion Microbubbles - CR in storage buffer

5 mL Human T Cell Depletion Antibody Cocktail - CR in sterile Separation Buffer.

Expiration dates are indicated on the labels for each individual component.

Storage

This product is shipped refrigerated and must be stored between +2 °C and +8 °C immediately upon receipt. Do not freeze.

Product Description

The Akadeum Human T Cell Depletion Kit depletes endogenous human CD3+ T cells from various samples such as cell cultures. This kit serves as a method to rapidly and efficiently deplete human CD3+ T cells without columns and magnets, which is particularly useful for allogeneic CAR-T (chimeric antigen receptor T cells) manufacturing processes. Akadeum's Human T Cell Depletion Antibody Cocktail recognizes the human T cell receptor-CD3 complex, labeling CD3+ cells and leading to T cell depletion through binding of microbubbles and separation through buoyancy with simple centrifugation or gravity. Unlabeled non-CD3+ cells can be recovered by removal of microbubble-bound CD3+ cells. Non-CD3+ cells are untouched and ready to use for downstream applications, such as cell culture, flow cytometric characterization, molecular assays, or cell storage.

Intentions for Use

This kit is designed to deplete CD3+ T cells from a maximum of 5 x 10^9 starting cells.

The components of the Human T Cell Depletion Kit – CR are intended for the ***ex vivo*** depletion of human T cells from various samples for cell-based clinical research. They are not intended for human ***in vivo*** uses.

Quality Statement

GMP Clinical Ready

Akadeum CR products are manufactured according to cGMP at Akadeum Life Sciences®, Ann Arbor, MI, under a quality management system in compliance with 21 CFR 820, 210, 211, and 11. They are developed following ISO 20399 and USP <1043> recommendations on ancillary materials and tested according to ISO 10993.

All components tested for endotoxins as per USP <85> Bacterial Endotoxins.

Sterile as per USP <71> Sterility Tests.

STERILE A Antibody cocktail manufactured asepctically. Buffer processed with 0.2 µm filtration.

STERILE R Microbubbles sterilized with in-process electron beam and then filled aseptically.

Safety Information

For information regarding hazards and safe handling practices, please consult the Safety Data Sheet.

Warnings

Do not use after the use-by date listed on the product label.

Do not use product if package is damaged.

Handling Guidelines

- When working with human blood products, including; cells, serum, and plasma, follow universal precautions.
- Proper Personal Protective Equipment (PPE) including lab coats, gloves, and eye protection are recommended when working with human tissues.
- Open solution transfers like spike connections and pipetting must be performed under a class 100 biological safety cabinet using aseptic technique.
- Human blood products must be treated as a potential source of HIV, HBV, and other bloodborne pathogens.
- Materials contaminated with blood products should be disposed of in labeled biohazard containers or decontaminated by site approved decontamination methods.

Additional Supplies Required

- 20 rpm end-over-end tube rotator for mixing
- Centrifuge (swinging bucket rotor strongly recommended)
- Vacuum aspirator
- Sterile 50 mL tubes
- Buffer of choice

Limited Warranty

Akadeum Life Sciences® warrants their products as set forth in their General Terms and Conditions. Questions and requests can be sent to info@akadeum.com.

Related Products

Catalog Number	Product
13210-221GMP	Human T Cell Leukopak Isolation Kit - GMP
13310-224GMP800	Human T Cell Selection, Activation, and Expansion Kit - GMP
13310-224CR800	Human T Cell Selection, Activation, and Expansion Kit - CR
13510-232GMP	Human T Cell Depletion Kit - GMP (5 Billion Cells)

Before You Begin

- This user guide is designed for isolations using 1 x 10^9 cells (3 mL) as starting sample, however, the process is scalable from 10 x 10^6 – 5 x 10^9 cells. For alternative starting numbers, please contact techsupport@akadeum.com.
- For maintenance of sterility, cell isolation should be conducted in a biosafety cabinet using aseptic technique.

Instructions for Use

Label cells to be depleted

1. Prepare cells to 333 x 10^6 cells/mL in buffer of choice prior to depletion process.
2. Transfer 3 mL cells to a fresh, sterile 50 mL tube and add 1 mL T Cell Depletion Antibody Cocktail.
3. Gently vortex the sample tube for 1 – 2 seconds to ensure even mixture. Gentle up and down pipetting is also sufficient. Be careful to avoid air bubbles (foaming) during pipetting.
4. Incubate the sample tube at room temperature for 10 minutes.

Bind Depletion Microbubbles

5. Resuspend T Cell Depletion Microbubbles by rolling the vial several times between hands, followed by inverting multiple times to reach a homogeneous suspension and making sure T Cell Depletion Microbubbles are thoroughly resuspended immediately prior to addition to sample.
6. At the end of the 10 minute incubation from Step 4, add 10 mL of T Cell Depletion Microbubbles and 26 mL buffer to the labeled cell sample to achieve a final volume of 40 mL (approximately 80% volume of the tube capacity).
7. Mix using a commercial end-over-end rotator at 20 rpm for 15 minutes at room temperature.

Separate cells

8. Centrifuge for 5 minutes at 400g at room temperature. Use of a swing bucket rotor is strongly encouraged.
9. Carefully retrieve the sample tube from centrifuge with minimal disturbance of T Cell Depletion Microbubble layer. Use a vacuum aspirator to carefully remove the white microbubble layer and supernatant while being careful not to disturb the remaining cells of interest.
10. Resuspend cells with small amount desired cell medium and transfer to a new tube for further use in downstream applications.

Glossary of Symbols:

REF	Catalog Number
QTY	Contents of packaging
GMP Clinical Ready	Manufactured using Good Manufacturing Practices
STERILE A	Sterilized using aseptic processing techniques
STERILE R	Sterilized using radiation sterilization techniques
	Temperature Limit
	Use-by date
	Do not use if package is damaged

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Visit www.akadeum.com for how-to videos, additional product information, and tech support

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