

# CTS™ Immune Cell SR

Catalog Numbers A4702901, A4702902

Pub. No. MAN0026548 Rev. 1.0



**WARNING!** Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from [thermofisher.com/support](https://www.thermofisher.com/support).

## Product description

Gibco™ CTS™ Immune Cell SR is intended to be used as a serum substitute for *in vitro* culture of human immune cells. CTS™ Immune Cell SR is a defined xeno-free formulation and does not contain bovine or other non-human, animal-derived components.

## Contents and storage

Contents	Cat. No.	Amount	Storage	Shelf life <sup>[1]</sup>
CTS™ Immune Cell SR (bag format)	A4702901	250 mL	Maintain flat inside secondary HDPE container at –20°C to –5°C. Protect from light.	12 months
	A4702902	1 L		

<sup>[1]</sup> Shelf-Life duration is determined from Date of Manufacture.

## Safety information

Human origin materials are non-reactive (donor level) for anti-HIV 1 & 2, anti-HCV, and HBsAg. Handle in accordance with established bio-safety practices.

## Culture conditions

**Media:** Complete medium is comprised of a basal cell culture media or cell media kit (CTS™ AIM-V™ SFM, CTS™ OpTmizer™ T-Cell Expansion SFM, or other supportive media) containing CTS™ Immune Cell SR

**Culture type:** Suspension

**Culture vessels:** Cell culture plates, T-flasks, G-Rex flasks or cell culture bags

**Temperature range:** 36°C to 38°C

**Incubator atmosphere:** Humidified atmosphere of 4–6% CO<sub>2</sub> in air. Ensure that proper gas exchange is achieved in culture vessels.

## Important information

For best results, pre-equilibrate complete medium to temperature (36°C to 38°C) and gases (4–6% CO<sub>2</sub> in humidified air) before use.

### IMPORTANT!

- During storage and thawing of CTS™ Immune Cell SR, keep product inside the secondary HDPE container and in a flat orientation.
- Avoid overexposure of cultures to light.

## Procedural guidelines

- To ensure integrity of the Thermo Scientific™ Labtainer™ BioProcess Container, CTS™ Immune Cell SR is shipped in a secondary HDPE container. The product should remain in this secondary container during storage and thawing.
- CTS™ Immune Cell SR is used to supplement basal medium such as CTS™ OpTmizer™ T-Cell Expansion SFM or CTS™ AIM-V™ SFM for a complete medium suitable for growth of immune cells.
- CTS™ Immune Cell SR has also been shown to support *in vitro* expansion of gene-modified T-cells using lentiviral vectors, CTS™ Dynabeads™ CD3/CD28 and CTS™ Dynabeads™ Treg Xpander bead-based expansion. CTS™ Immune Cell SR media supplement may also work in other immune cell culture protocols (e.g., NKT or dendritic cells), although it has not been tested for such applications.
- Immune cell culture methods and cell sources may vary; we recommend using CTS™ Immune Cell SR at 2–5% and that you experimentally determine the optimal concentration for your culture system.
- Some media and applications may require the addition of L-Glutamine, CTS™ GlutaMAX™-I Supplement and growth factors (e.g., IL-2) to support growth. Follow standard media protocols provided by the media vendor, or your own internal protocols developed for your specific process.
- CTS™ Immune Cell SR in complete medium is stable for 2–4 weeks when stored in the dark at 2°C to 8°C. Avoid repeated warming and chilling of the complete medium. Warm only the volume required for that day's use.

## Thaw CTS™ Immune Cell SR

1. Place CTS™ Immune Cell SR in the secondary HDPE container on a flat surface at ambient temperature (15°C to 30°C) and thaw without disturbing.

Contents	Cat. No	Amount	Thaw temperature	Time to thaw
CTS™ Immune Cell SR	A4702901	250 mL	Ambient	10–12 hours
	A4702902	1 L		16–20 hours

**\*\*Do not place product in a water bath**

2. After suggested thawing duration, check the status of thawing. If the product is not thawed, close the secondary container and check for complete thawing every ~30 minutes.

### IMPORTANT!

- Thawing at 2°C–8°C is not recommended.
- Do not place product in a water bath.

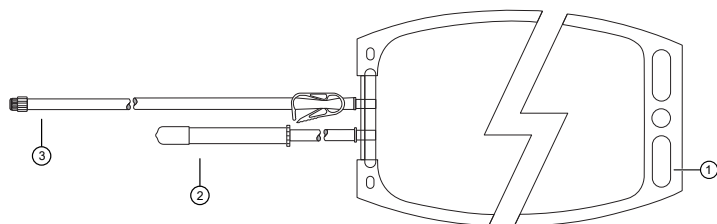
3. Store the thawed CTS™ Immune Cell SR at 2°C to 8°C in the dark for up to 4 weeks.

It is normal to see some flocculent material in the CTS™ Immune Cell SR while thawing, but this material will go into solution with gentle swirling.

## Product configuration

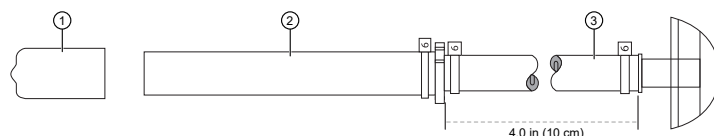
CTS™ Immune Cell SR is provided in two formats. Design A is 250 mL filled in a 500 mL Thermo Scientific™ Labtainer™ BioProcess Container or Design B is 1 L filled in a 2 L Thermo Scientific™ Labtainer™ BioProcess Container.

### Thermo Scientific™ Labtainer™ BioProcess Container (BPC) Design A



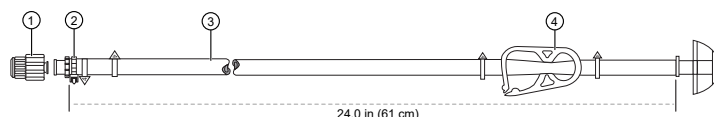
**Figure 1 Thermo Scientific™ Labtainer™ BioProcess Container (BPC) Design A**

- ① A: Container: 250 mL in a 500 mL Thermo Scientific™ Labtainer™ BioProcess Container (BPC) made of Thermo Scientific™ Aegis™ 5–14 film. Tubing sets and BPC will be polybagged.
- ② Line 1
- ③ Line 2



**Figure 2 Line 1**

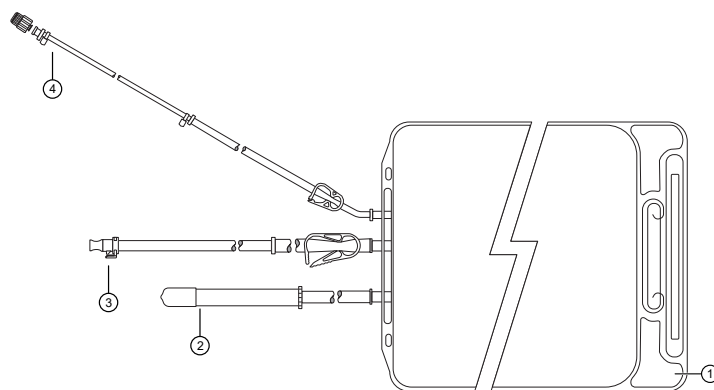
- ① Fitting: tube cap, silicone fill cap
- ② Fitting: precut, EVA tubing for filling
- ③ Tubing: 374 C-Flex™ tubing, 1/4 in. ID x 1/8 in. wall



**Figure 3 Line 2**

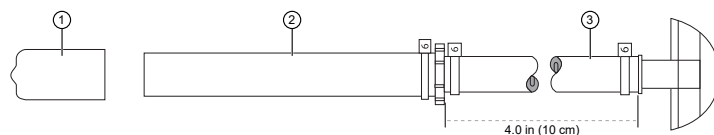
- ① Fitting: polycarbonate, injection site, male
- ② Fitting: polypropylene, Luer lock, female, 1/8 in.
- ③ C-Flex™ tubing: 1/8 in. inner dimension, 1/16 in. wall
- ④ Fastener: snapper clamp, 3/6–3/8 in.

### Thermo Scientific™ Labtainer™ BioProcess Container (BPC) Design B



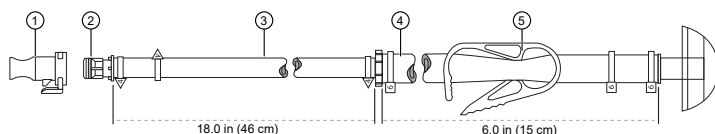
**Figure 4 Thermo Scientific™ Labtainer™ BioProcess Container (BPC) Design B**

- ① Container: 1 L in a 2 L Thermo Scientific™ Labtainer™ BioProcess Container (BPC) (made of Thermo Scientific™ Aegis™ 5–14 film); tubing sets and BPC will be double polybagged
- ② Line 1
- ③ Line 2
- ④ Line 3



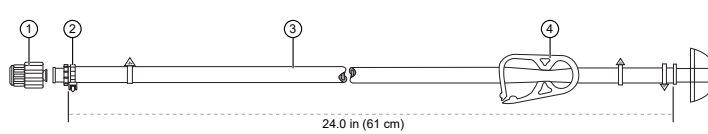
**Figure 5 Line 1**

- ① Fitting: tube cap, silicone fill cap
- ② Fitting: precut EVA tubing for filling
- ③ Tubing: 374 C-Flex™ tubing, 3/8 in. inner diameter x 1/8 in. wall



**Figure 6 Line 2**

- ① Fitting: polycarbonate quick connect, cap (MPC)
- ② Fitting: polycarbonate quick connect, 1/4 in. insert (MPC)
- ③ Tubing: 374 C-Flex, 1/4 in. inner diameter x 3/32 in. wall
- ④ Tubing: 374 C-Flex, 3/8 in. inner diameter x 1/8 in. wall
- ⑤ Fastener: snapper clamp, 1/2–3/4 in.



**Figure 7 Line 3**

- ① Fitting: polycarbonate, injection site, male
- ② Fitting: polypropylene, luer lock, female, 1/8 in.
- ③ Tubing: 374 C-Flex tubing, 1/8 in. inner diameter, 1/16 in. wall
- ④ Fastener: snapper clamp

## Related products

Unless otherwise indicated, all materials are available through [thermofisher.com](https://www.thermofisher.com).

Catalog numbers that appear as links open the web pages for those products.

Item	Source
CTS™ AIM-V™ SFM	<a href="#">0870112BK</a>
CTS™ AIM-V™ Medium, without phenol red, without antibiotics	<a href="#">A3830801</a> , <a href="#">A4672701</a>
CTS™ OpTmizer™ T-Cell Expansion SFM	<a href="#">A1048503</a>
CTS™ OpTmizer™ T-Cell Expansion SFM, no phenol red	<a href="#">A3705003</a>
CTS™ Dynabeads™ Treg Xpander	<a href="#">46000D</a>
CTS™ Dynabeads™ CD3/CD28	<a href="#">40203D</a>
L-Glutamine (200 mM)	<a href="#">25030081</a>
CTS™ GlutaMAX™-I Supplement	<a href="#">A1286001</a> , <a href="#">A4737001</a>
CTS™ DPBS without calcium chloride, without magnesium chloride	<a href="#">A1285602</a>

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For descriptions of symbols on product labels or product documents, go to [thermofisher.com/symbols-definition](https://www.thermofisher.com/symbols-definition).

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**Revision history:** Pub. No. MAN0026548

Revision	Date	Description
1.0	13 April 2022	New document for the use of CTS™ Immune Cell SR.

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