CytoPak Human IL-2 Protein, premium grade

Catalog # IL2-H5113GB02

For Closed System Manufacturing

Product Description

CytoPak Human IL-2 Protein, premium grade is packaged in sterile closed containers that can be readily incorporated into ex vivo clinical production processes. The bag utilizes medical grade multilayer film with two weldable options. The outlet weldable tube contains a proximal TPE section (1/8'' ID x 1/4'' OD) and a distal PVC section (3/32'' ID x 5/32'' OD). The liquid state and closed-system packaging of CytoPak Human IL-2 Protein, premium grade can be directly welded to media bags, resulting in safety and user-friendliness by bypassing the reconstitution step during manufacture.

Features

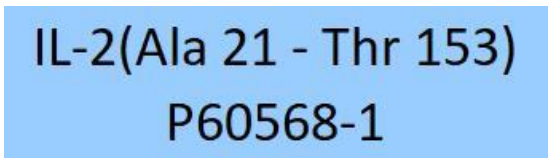
1. Closed System Process
2. Minimized Manual Touchpoints
3. Ready-to-Use Format
4. Enhanced Efficiency
5. Weldable Tubing
6. Animal-Free Materials
7. Beta-lactam Materials Free
8. Batch-to-batch Consistency

Source

CytoPak Human IL-2 Protein, premium grade (IL2-H5113GB02) is expressed from E. coli cells. It contains AA Ala 21 - Thr 153 (Accession # P60568-1).

Predicted N-terminus: Met

Molecular Characterization



This protein carries no "tag".

The protein has a calculated MW of 15.4 kDa. The protein migrates as 16 kDa±2 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE).

Endotoxin

Less than 5.0 EU/mL, tested by the rFC method.

Host Cell Protein

<0.5 ng/μg of protein tested by ELISA.

Host Cell DNA

<0.1 ng/μg of protein tested by qPCR.

Sterility

Negative

Mycoplasma

Negative

Purity

>95% as determined by SDS-PAGE.

Formulation

Supplied as 0.2 μm filtered solution in phosphate with protectants.

Shipping

This product is supplied and shipped with dry ice, please inquire the shipping cost.

Storage

Upon receipt, store it immediately at -70°C or lower for long term storage.

Please avoid repeated freeze-thaw cycles.

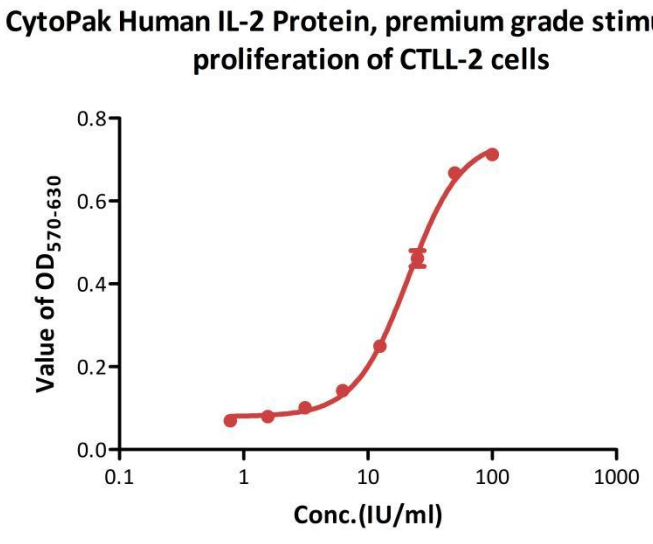
This product is stable after storage at:

-70°C for 24 months;

Can be stored up to 2 weeks at -20°C;

Can be stored up to 1 week at 2-8°C.

Bioactivity- CELL BASE

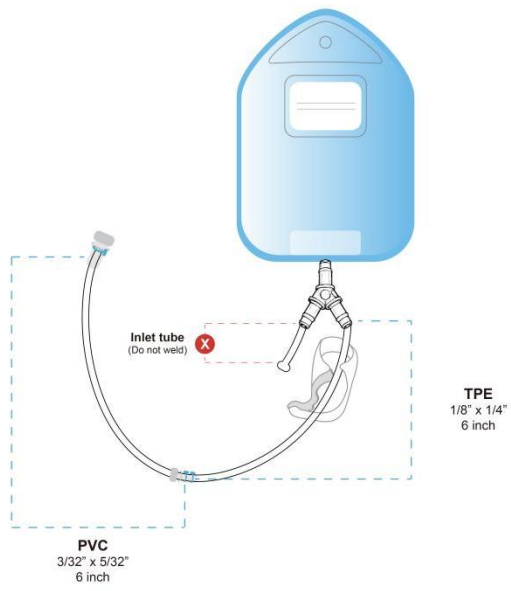


CytoPak Human IL-2 Protein, premium grade (Cat. No. IL2-H5113GB02) stimulates proliferation of CTLL-2 cells. The specific activity of CytoPak Human IL-2 Protein, premium grade is ⩾ 1.20 x 10^7 IU/mg, which is calibrated against human Interleukin-2 China National Standard (NIFDC code: 270008) (QC tested). China National Institutes for Food and Drug Control (NIFDC) Standard was prepared and calibrated against human IL-2 WHO International Standard (NIBSC code: 86/500) by NIFDC.

Bag design

The long outlet tube affixed to the bag consists of two distinct segments that are joined together with an in-line barb connector. Both sections are made from weldable materials. The section closer to the bag is made of weldable TPE (1/8'' ID x 1/4'' OD), while the section farther from the bag is made of weldable PVC (3/32'' ID x 5/32'' OD). Both sections are about 6 inch long. The TPE section has a pinch clamp, which users can slide to the desired position and clamp the tube securely.

The other shorter tube attached to the bag is the inlet tube, which is not recommended for liquid exchange. To make a weldable connection to CytoPak, please refer to the user manual below.



General Guidelines

- **Equipment Needed**

1. Tube Welder

2. Tube Sealer

- **Caution**

3. Avoid placing heavy objects directly on top of the bag, as excessive pressure can jeopardize the integrity of the packaging.

4. Ensure the pinch-clamp on the outlet tube is not released before a sealed connection is made. If the pinch-clamp does not work before connection, you could use vessel clamp to clamp the closer section of the bag.

5. The PVC tubing may become fragile during transit when packed with dry ice. For immediate use, let the bag thaw for approximately 1 hour before taking it out of the box.

- **Connection Method**

Prepare

6. Take out CytoPak from -70 ℃ storage and thaw at room temperature 1 hour or 4℃ overnight.

7. As the PVC line may turn brittle during transportation on dry ice. Let CytoPak remain in the box for 5 minutes at room temperature prior to removing.

8. Remove the CytoPak from the plastic bag and ensure it is completely thawed. Mix gently several times.

9. Make sure the pinch clamp is securely engaged on the outlet line.

Add CytoPak to Media Bag

10. Weld the CytoPak bag to a media bag using aseptic welding protocol.

There are two options for connecting to the CytoPak bags: weldable connection via proximal TPE section (1/8'' ID x 1/4'' OD) and distal PVC section (3/32'' ID x 5/32'' OD). Both of the tubes are about 6 inch long (15cm).

11. Once the welding process is finished, release the pinch clamps in the outlet tubing line, then allow the solution from CytoPak bag flow into media bag. You can tilt the bag a bit to make solution in the CytoPak bag drain through the outlet tubing as much as possible.

12. We have conducted extensive testing and validation to eliminate the residual volume in the tubing and the bag, user can repeatedly transfer the media between the media bag and the CytoPak bag 10 times to fully recover the cytokines to media bag.

13. Clamp the tube between the CytoPak bag and the media bag.

a. Confirm the clamp on the media bag side is closed to media bag and engage clamp.

b. Confirm the clamp on the CytoPak side is close to CytoPak bag and engage clamp.

14. Seal and disconnect the tubing between the media bag and CytoPak bag.