

TheraPEAK™ X-VIVO™ Media Systems

General information

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I. Introduction

Lonza's R&D efforts and involvement with numerous clinical trials have provided us with the tools and expertise to support developments in adoptive immunotherapy, cancer therapy, genetic therapy and other cellular therapies. Our philosophy for the development of serum-free media formulations for use in cellular therapy is to provide a nutritionally complete and balanced environment for the cells. Our TheraPEAK™ X-VIVO™ Media do not contain any exogenous growth factors, artificial stimulators of cellular proliferation or undefined supplements.

The products are devoid of any protein kinase C stimulators and are suitable for the investigation of secondary messenger systems in the activation of human and murine lymphocytes.

For answers to frequently asked questions and citations regarding these products, please visit our Knowledge Center:

<http://knowledge.lonza.com>

II. TheraPEAK™ X-VIVO™ 10 Medium

The TheraPEAK™ X-VIVO™ 10 Medium formulation is designed to support the generation of Lymphokine Activated Killer (LAK) cells in a serum-free environment. The original protocols involved the incubation of patient or normal donor Peripheral Blood Lymphocytes (PBL) at 1.0-3.0 x 10⁶ cells/mL for a period of 3 days in the presence of 1,000 Cetus units of rIL-2/mL. Optimal LAK cell generation is achieved when peripheral blood lymphocytes are incubated for three to ten days at a density of 1.0 - 6.0 x 10⁶ cells/mL in the presence of 100 - 1000 Cetus units of rIL-2. TheraPEAK™ X-VIVO™ 10 Medium is available as a 1x liquid in three convenient configurations.

III. TheraPEAK™ X-VIVO™ 15 Medium

TheraPEAK™ X-VIVO™ 15 Medium is similar in composition TheraPEAK™ X-VIVO™ 10 Medium and has been optimized for the proliferation of Tumor Infiltrating Lymphocytes (TIL) under serum-free conditions. The formulation supports the proliferation of purified CD3+ cells isolated from peripheral blood and human tumors. TheraPEAK™ X-VIVO™ 15 Medium has also been used to support the growth of human monocytes, macrophage cells and cell lines, PBL, granulocytes and natural killer (NK) cells. In addition, TheraPEAK™ X-VIVO™ 15 Medium provides a serum-free environment for the expansion of HUT-78 and related human lymphocytic cell lines. TheraPEAK™ X-VIVO™ 15 Medium is available as a 1x liquid in multiple configurations.

IV. TheraPEAK™ X-VIVO™ 20 Medium

TheraPEAK™ X-VIVO™ 20 Medium was developed and optimized to support the generation of LAK cells from monocyte-depleted PBL at high density. Initial

cell densities between 2.0 - 3.0 x 10⁷ cells/mL were successfully used to generate LAK cells. TheraPEAK™ X-VIVO™ Medium 20 may also be used as a growth medium for PBL and TIL.

V. Additional applications for TheraPEAK™ X-VIVO™ Media

- Proliferation of PBL
- Proliferation of TIL
- Cryopreservation and transplantation of organs
- Cultivation of human monocytes and macrophages
- Cultivation of stem cells
- Cultivation of dendritic cells
- Cryopreservation of human tissue
- Proliferation of draining lymph node lymphocytes

VI. Ordering information:

Additional formulations that can be used for research use only are available upon request. Please contact Scientific Support for further information.

VII. Selected list of cell types grown with TheraPEAK™ X-VIVO™ Media

- Human and murine LAK cells
 - Peripheral Blood Lymphocytes
 - Human and murine TIL
 - Human T cells
 - Human and murine macrophages
- Human and murine hematopoietic stem cells (colony formation and proliferation)

VIII. Storage

TheraPEAK™ X-VIVO™ Medium should be stored at 2 - 8°C. Protect from light.

Product Use Statement

These products are to be used for further manufacturing or laboratory purposes only. Performance characteristics have not been established.

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Cat. No. NA	Cat. No. EU	Product	Size	Label Claim
BP04-743Q	BEBP04-743Q	TheraPEAK™ X-VIVO™ 10 Medium without gentamicin and phenol red	1 L	FFM*
N/A	BEBP02-055Q	TheraPEAK™ X-VIVO™ 10 Medium with L-glutamine, without gentamicin or phenol red, contains recombinant transferrin	1 L	FFM
BP04-744Q	BEBP02-061Q	TheraPEAK™ X-VIVO™ 15 Medium with L-glutamine, without gentamicin and phenol red,	1 L	FFM
N/A	BEBP02-054Q	TheraPEAK™ X-VIVO™ 15 Medium with L-glutamine, without gentamicin and phenol red, contains recombinant transferrin	1 L	FFM

*For Further Manufacturing