

Dynal® T4 Quant Kit

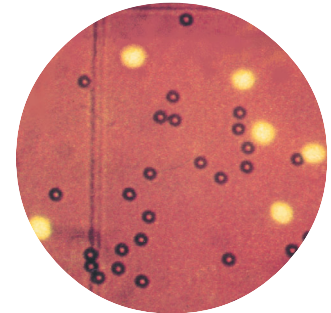
Human CD4⁺ T Cell Counting from Whole Blood

Safe, accurate and reliable - 30 minute procedure
No need for sophisticated equipment or calibration curve
Cells can be counted with fluorescent or light microscopy

Introduction

For monitoring HIV-infected patients under treatment, Dynal Biotech has developed an easy, fast and cheap procedure to efficiently isolate CD4⁺ T cells directly from whole blood, without the need for expensive equipment.

The Dynal® T4 Quant Kit will isolate CD4⁺ T cells directly from whole blood. The isolated cells can be lysed and the nuclei counted in a haematocytometer with fluorescent microscopy, light microscopy or automatic cell counting.



Principle

The isolation procedure of the CD4⁺ T cells is fast, easy and performed in three main steps (fig.1):

1. Depletion of monocytes with Dynabeads® CD14
2. Positive isolation of CD4⁺ T cells with Dynabeads® CD4
3. The lysis solution releases the nuclei for staining or automatic counting

Some monocytes express the CD4 antigen, so highly efficient monocyte pre-depletion with Dynabeads® CD14 ensures accurate CD4⁺ T cell counts, even to the lowest range. The cell isolation procedure takes just 30 minutes and is performed at room temperature.

A simple, small magnet, the Dynal MPC®-S, ensures safe and easy sample handling. The cell counting protocol is recommended for use with fluorescence microscopy or light microscopy.

This flexibility in counting makes instructions easily adaptable in any laboratory, avoiding the need to invest in expensive equipment.

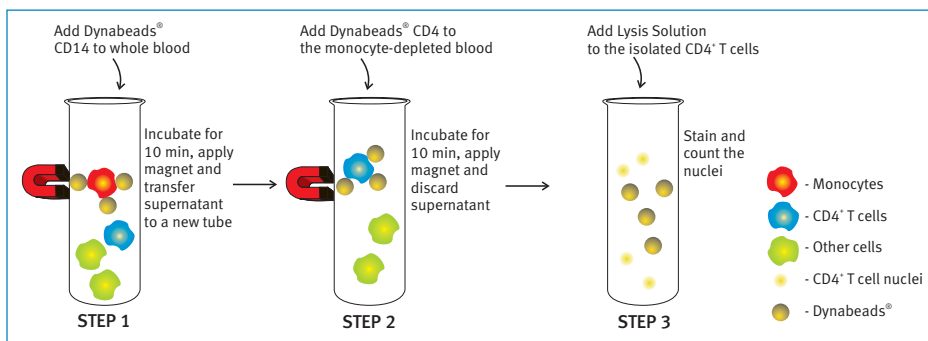


Fig. 1: Positive isolation of CD4⁺ T cells with pre-depletion of monocytes for reliable CD4⁺ T cell nuclei counting

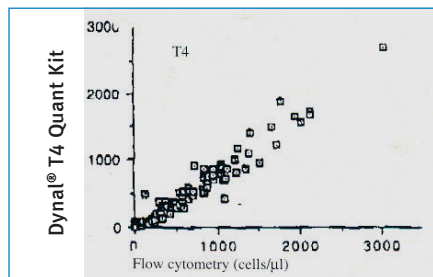
Product Content

The Dynal® T4 Quant Kit is sufficient for 80 tests at 125 µl whole blood per test and contains:

- 2 ml Dynabeads® CD14 (25 µl Dynabeads® per test)
- 2 ml Dynabeads® CD4 (25 µl Dynabeads® per test)
- 7 ml Lysis Solution (50 µl/test for fluorescent and 80 µl/test for light microscopy)

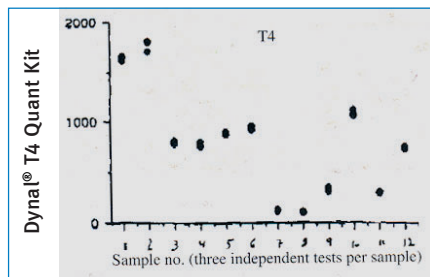
Isolation and counting of the CD8⁺ T cell population is possible and documented, but these reagents are not supplied with the kit.

Results



Excellent correlation to flow cytometry.

Correlation co-efficient of 0.97 for CD4 as compared to flow cytometry in the study of normal and HIV positive individuals.



Reproducible results.

Reliable immune status monitoring over time is ensured by reproducible cell-counting. The results are obtained as the number of cells per microlitre whole blood, greatly facilitating inter-laboratory result comparison.

Major Benefits of the Kit

- Fast and easy 30 minute procedure at room temperature
- Isolation directly from whole blood samples
- Compatible with both fluorescent and light microscopy
- No automated machines or expensive equipment needed
- Consistent results with high correlation to flow cytometry

Ordering Information

Product	Product No.	Quantity	
Dynal® T4 Quant Kit	113.21	2 ml	(80 tests)
Dynabeads® CD8	111.07/08	2 ml/10 ml	(80/400 tests)
Dynabeads® CD14	111.11/12	2 ml/10 ml	(160/800 tests)
Dynal MPC®-S	120.20	unit	(for 6 tubes)
Dynal Sample Mixer (MX-1)	159.07	unit	(12 tube wheel)

The product is only available through our office in France.
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