



## CD4 Blood Controls for Flow Cytometry

Quantitation of CD4<sup>+</sup> T cells in human blood by flow cytometry provides a vital tool in evaluating many human immunodeficiencies.

CD4 blood controls developed by Cytomark are stabilised preparations of human whole blood with validated CD4<sup>+</sup> T cell absolute counts. They are intended as daily run controls to ensure that sample processing, equipment and operators are all performing optimally thereby providing quality assurance of the immune monitoring of patients. CD4 Blood Controls are available in two clinically-relevant levels of CD4<sup>+</sup> T cells, a normal concentration and a low concentration (200-300 cells/ $\mu$ l).

*CD4 Blood Controls are a vital tool in evaluating many human immunodeficiencies*

## Benefits of CD4 Blood Controls

- **Two controls available: CD4 Low and CD4 Normal**
- **Verification of monoclonal antibody and FACS reagents**
- **Validation of flow cytometer performance**
- **Verification of red blood cell lysis**
- **Validation of operator technique**

## Product Information

Two CD4 stabilised blood controls are available; a normal CD4 blood cell profile (product code: CF04-N) and a low CD4 profile (product code: CF04-L). These controls can be purchased separately or as a pair (CF04-Duo). Each control is 1.5ml in volume, evaluation samples are available, please contact us for details at: [office@caltagmedsystems.co.uk](mailto:office@caltagmedsystems.co.uk).

PRODUCT CODE	PRODUCT	VOLUME
CF04-L	CD4 Low Blood Control	1.5ml
CF04-N	CD4 Normal Blood Control	1.5ml
CF04-Duo	CD4 Low & Normal Blood Control Set	2 x 1.5ml

## Safety

Human source material used to manufacture these products is tested for all known UK and European required communicable disease agents using UK NEQAS approved testing methods.



# Technology & Preparation of CD4 Blood Controls

CD4 stabilised blood controls are prepared using the proprietary CytoFix® blood stabilisation technology. The stabilisation process is robust and results in controls that are stable for up to 90 days when stored at 2-8°C.

Two CD4 stabilised blood controls are available; a normal CD4 blood cell profile, refer to graphs A and B, (product code: CF04-N) and a low CD4 profile, refer to graphs C and D, (product code: CF04-L). These controls can be purchased separately or as a pair (product code: CF04-Duo). Each control is 1.5ml in volume, evaluation samples are available on request, please contact us for details.

In the controls, the white cell profile is adjusted to give a specific CD4<sup>+</sup> T cell count. CD4 Normal Blood Control (CF04-N) has a CD4<sup>+</sup> T cell absolute count within the normal healthy range (between 410 and 1590 cells/ $\mu$ l of blood). CD4 Low Blood Control (CF04-L) has a CD4<sup>+</sup> T cell absolute count of between 200 and 300 cells/ $\mu$ l, which simulates CD4 levels in advanced HIV/AIDS patients.

Quality control analysis is performed on a BD FACSCalibur with Cytognos reagents using the Lyse/No Wash method. All CD4 stabilised blood controls are supplied with a QC certificate detailing the expected count and range for CD4<sup>+</sup> T cells, CD8<sup>+</sup> T cells, NK cells and B cells.

CD4 blood controls prepared using the CytoFix technology can also be used in External Quality Assurance (EQA) programmes due to their exceptional stability.

## Storage & Stability

CD4 Blood Controls are stored at 2-8°C. They have a closed vial stability of 90 days and an open vial stability of 30 days.

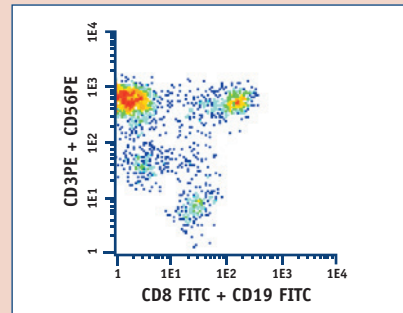
Cytomark also produce **TransFix** a stabilisation solution that prevents cellular degradation. Please request a brochure by emailing us at [office@caltagmedsystems.co.uk](mailto:office@caltagmedsystems.co.uk).

*A wide range of references are available from the Cytomark website.*

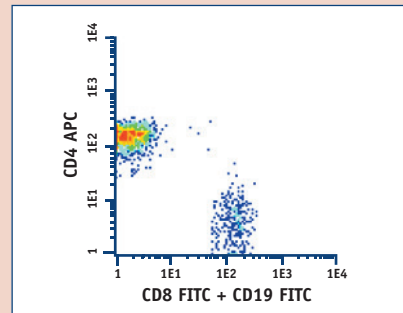
## CD4 Normal Blood Control

Graphs A) and B) show the typical lymphocytic profile for CD4 Normal Blood Control.

A)



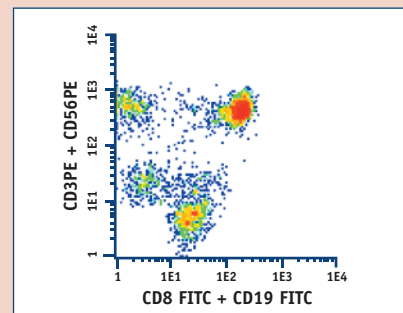
B)



## CD4 Low Blood Control

Graphs C) and D) show the typical lymphocytic profile for a CD4 Low Blood Control, with reduced CD4<sup>+</sup> T cells.

C)



D)

