



Harnessing the power of T cells.

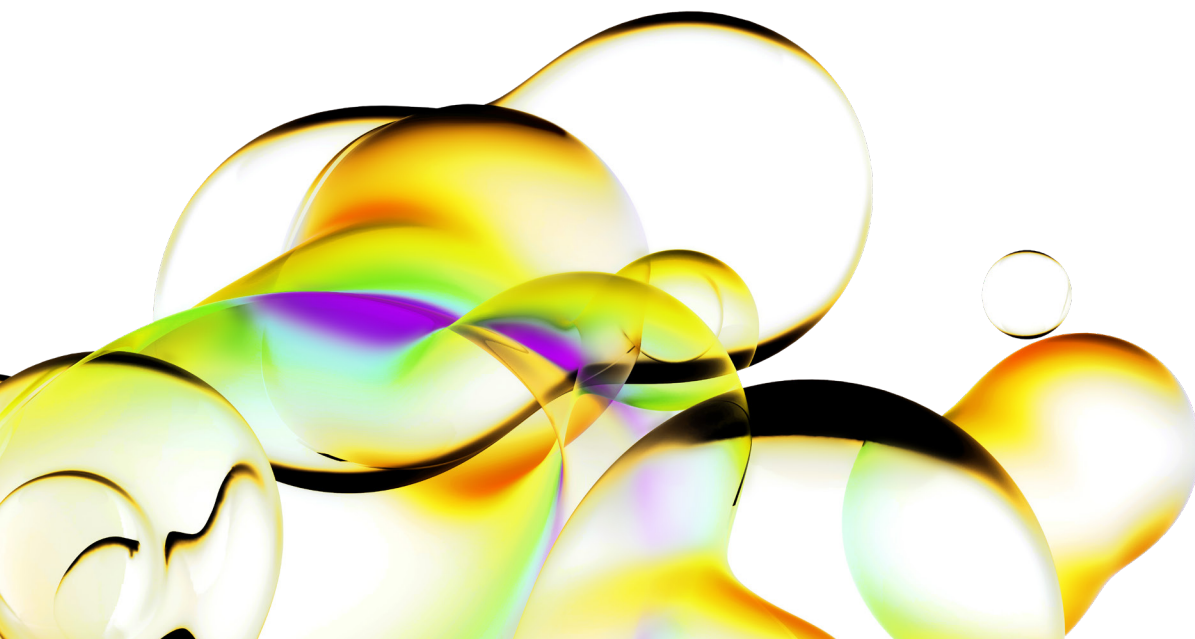
How can Cytomegalovirus (CMV) cell-mediated immunity be used to provide more information about CMV immune status?

CMV and the role of T cell immunity

CMV is an opportunistic virus and common cause of morbidity and mortality in solid organ and hematopoietic stem cell transplant patients. T cell immunity against CMV is an important factor in maintaining viral latency and reducing susceptibility to disease. Routine monitoring of an individual's CMV specific T cell response may assist the evaluation of patients at risk of CMV disease and guide antiviral prophylaxis management.^{1,2,3}

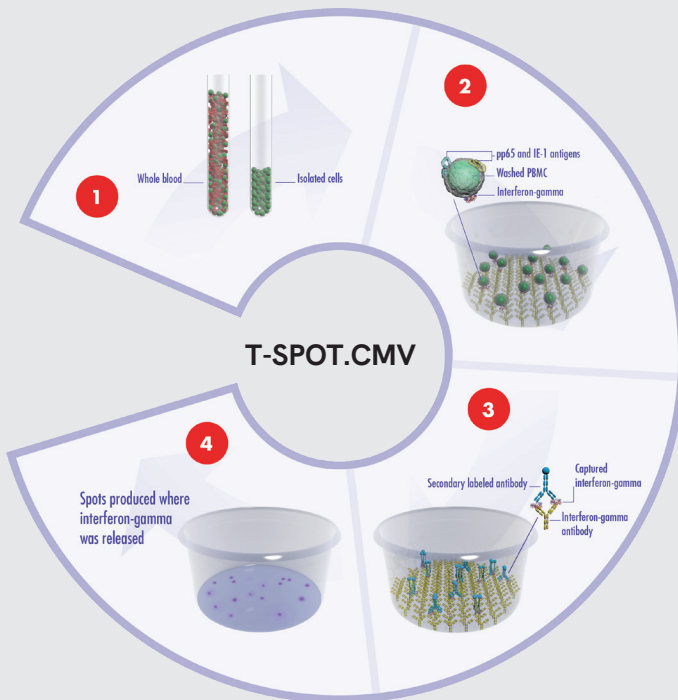
The T-SPOT™.CMV test

The T-SPOT.CMV test uses the T-SPOT technology to assess a patient's level of anti-CMV cell-mediated immunity by isolating and stimulating the immune cells with CMV specific antigens.



The T-SPOT technology

The proprietary T-SPOT technology is a simplified variant of the ELISPOT technique. It measures the immune cell responses at a single cell level and detects T cell activation through interferon-gamma release to assess the patient's immune system.



1. A blood sample is collected using routine phlebotomy and a standard blood collection tube from which a subset of white blood cells, known as peripheral blood mononuclear cells (PBMC), are isolated. The cells are washed, counted and normalized to create a standard cell suspension.
2. A standard number of cells are added into specially designed plates and stimulated with CMV-specific antigens pp65 and IE-1. Cells responding to these antigens release the cytokine interferon-gamma.
3. Interferon-gamma antibodies are used to directly capture interferon-gamma as it is released by the cells. A secondary labeled antibody is added and binds to the captured interferon-gamma.
4. A detection reagent is added and reacts with the secondary labeled antibody. This reaction produces spots, which are a footprint of where the interferon-gamma was released. Spots are then enumerated.

Contact your local sales representative to learn how the T-SPOT.CMV test can add value to your practice*
www.revivity.com

*Not available in all regions

References

1. Egli A, et al. State-of-the-Art monitoring of cytomegalovirus-specific cell-mediated immunity after organ transplant: a primer for the clinician. *Clin Infect Dis*. 2012;55(12):1678-1689.
2. Espigado I, Vicente F, et al. Timing of CMV-specific effector memory T cells predicts viral replication and survival after allogeneic hematopoietic stem cell transplantation. *Transplant International*. 2014;27(12):1253-1262.
3. Abate D, Saldan A, Ficon M, et al. Evaluation of cytomegalovirus (CMV)-specific T cell immune reconstitution revealed that baseline antiviral immunity, prophylaxis, or preemptive therapy but not antithymocyte globulin treatment contribute to CMV-specific T cell reconstitution in kidney transplant recipients. *J Infect Dis*. 2010;202(4):585-594.

This test has not been approved or cleared by the FDA.

