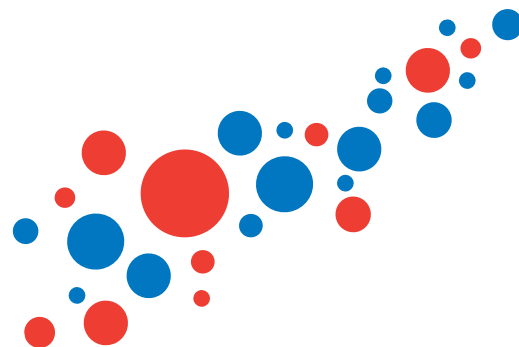


T Cell ELISPOT Kits



Measuring T cell-mediated immunity by flow cytometry or ELISPOT has been considered a complex art form that only highly-trained scientists can perform reliably. Even in specialized laboratories, reproducing data has been an issue due to this test's complexity (Janetzki et al., *Immunity*, 2009, 31:527-528). No longer! ImmunoSpot® Kits have been developed to ensure that even first-time users in different laboratories can obtain the correct data with their very first attempt to run an ELISPOT assay (Zhang et al., *J. Immunotoxicology*, 2009, 6:227).

“The ideal assay for immune monitoring should be sensitive, specific, reliable, (and) simple.”

SUMMARIZES JAMES P. ALLISON
IN A RECENT REVIEW

(SHARMA ET AL., *NATURE REVIEWS*, 2011, 11:805)

Exquisite Sensitivity

Optimized ELISPOT assays can reliably detect antigen-specific T cells even if they occur in frequencies of 0.0001% within PBMC; that is, a single analyte-secreting T cell can be reliably identified within one million bystander cells. This sensitivity is orders of magnitudes higher than that of flow cytometry. All ImmunoSpot® Kits are quality controlled to meet this exquisite sensitivity threshold. They come with CTL-Test™, a serum-free testing medium that was specially formulated to ensure that the assay performs with low background and high signal.

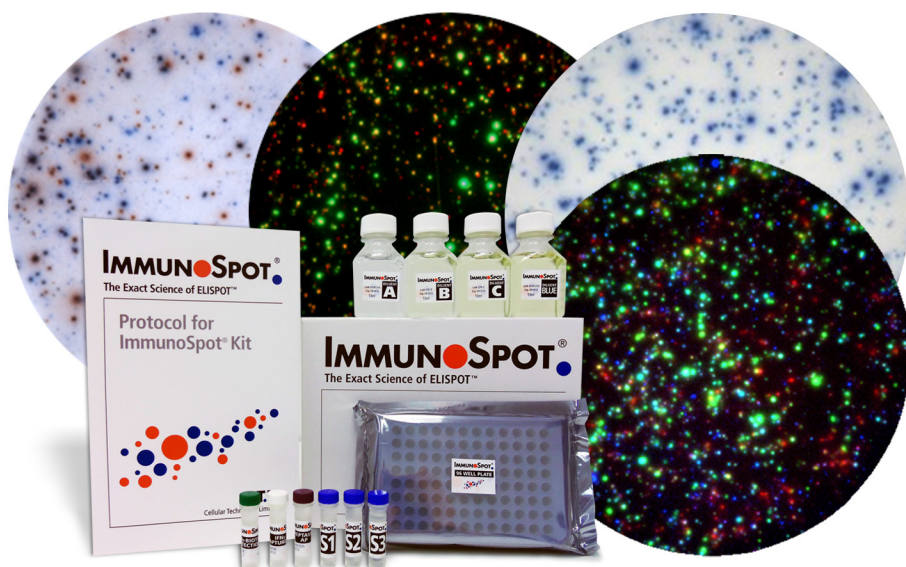
High Specificity

T cells secrete more cytokines on a per-cell level than cells of the innate immune system. Therefore, one can identify antigen-specific T cells vs. the irrelevant bystander cells based on

per-cell productivity. ImmunoSpot® Enzymatic Kits come with a substrate that precisely resolves the quantity of analyte produced by each cell, permitting accurate gating and data analysis. The CTL substrate technology prevents overdevelopment which allows adjacent spots in the most crowded wells to be resolved. Also, established development times can be used, avoiding the subjective judgement calls required when using common substrates. ImmunoSpot® Fluorescent Detection Kits come with conjugated tertiary antibodies that do not have spectral overlap. When scanned with an ImmunoSpot® Analyzer, there is no need for subjective color compensation.

Unparalleled Reliability

ImmunoSpot® Kits were designed to minimize common assay problems associated with unspecific enhancement or suppression. CTL-Test™ Medium is a standardized, serum-free alternative to the lot-to-lot variation experienced with serum-containing media that can interfere with the reliability of test results. ImmunoSpot® Kits can be used in conjunction with an eBMC® Reference Sample QC Set™ to reduce the intra- and inter-laboratory variability to a level that until recently, had been considered only a dream for T cell assays. (Zhang et al., *J. Immunotoxicology*, 2009, 6:227)



ImmunoSpot® Kits vs. the Competition*

Features and Benefits	ImmunoSpot®	Competition
Ease of Standardization Assay will provide the same test results when performed by the same or different individuals.	✓	?
Sterile Plates Avoids false-negative or false-positive wells. Sterile plates come standard in all ImmunoSpot® Assays. Competition charges a substantial premium for this specialty item.	✓	For a Premium
Serum-free Medium Included Special medium that has been developed for low-background and high-signal performance in ELISPOT assays.	✓	No
All Buffers Included Adds convenience, saves time and expense.	✓	No
No Blocking Saves time and effort.	✓	?
Fixed Substrate Development Time Standardizable spot numbers.	✓	No
No Potential for Substrate Overdevelopment Low background, clear spot separation, precise gating.	✓	No
Total Number of Washing Steps Saves time and effort.	12*	Over 20
Discounted Plate Scanning Available Get started immediately, even without an analyzer.	✓	?
Reference PBMC Available Facilitates assay development, qualification, and validation.	✓	No
ELISPOT Workshop Training Available Obtain hands-on experience, network, consult with experts.	✓	No
Assay Consultation Available CTL's experts help you reach your goal faster and safer.	✓	?

*Comparison based on the IFN-γ Assay

Streamlined Simplicity

ELISPOT assays have the reputation of being lengthy and complicated. The reagents included in ImmunoSpot® Kits have been tailored to shorten and simplify the assay procedure. Each Kit contains plates, antibodies, tertiaries, substrates, serum-free assay medium, and all diluents/buffers. ELISPOT assays have never been faster and easier!

The accurate, objective evaluation of ELISPOT data requires quality instrumentation. In order to analyze ELISPOT data properly, plates require scanning using a qualified reader. To help researchers get started, we offer discounted Scanning & Analysis Services with the purchase of any ImmunoSpot® Kit. Getting started with ELISPOT has never been more simple!

New: 384-well MiniSpot™ Plate Format and Three-Color FluoroSpot

Our new 384-well MiniSpot™ Plate Format allows for a 75% decrease in the number of PBMC needed, utilizing only 25,000 PBMC per well instead of 100,000 cells per well. The MiniSpot™ Plate Format enables researchers to screen extensive antigen/peptide libraries for T cell reactivity, study T cell avidity by titrating the antigen, or to multiplex analyte measurements by running assays in parallel when cell numbers are limited.

To further increase the use of precious cell material, we now offer a three-color T cell ImmunoSpot® Assay. The multiplexing of three analytes not only helps economize cell utilization, but it can also help researchers find polyfunctional cells with ease.

There is a precise number of antigen-specific T cells in each PBMC sample. Join the community of those who do not compromise in establishing that number. Pursue T cell measurements as a standardized, reproducible, and exact science.

Request your FREE Trial Kit today!

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