

MultiScreen[®]_{HTS} Filter Plates for Elispot

Optimized filter plates measure immune response on a single cell level

- ▶ Validated membranes
- ▶ Uniform spot morphology
- ▶ Easy membrane access
- ▶ Compatible with automation

Reliable Assay Results

Elispot assays are used for a range of applications to monitor immune responses and immunological response patterns, and can also be used to identify antigenic peptides and create vaccination strategies. Validated Elispot assays are highly reliable, reproducible and predictive. They can successfully measure antigen-specific T or B cells on a single cell level with results that closely mirror *in vivo* conditions and eliminate the need for long-term *in vitro* cell cultures.

New MultiScreen_{HTS} filter plates are specifically optimized for 96-well Elispot assays and are built to new specifications for improved performance.

Improved Spot Recovery and Spot Definition

MultiScreen_{HTS} filter plates are available with validated Immobilon[®]-P (PVDF) for superior results. Plates with HA (mixed cellulose esters) are also available. Both provide membranes with dense uniform pore structures to promote antibody binding and increase sensitivity for better, sharper spot definition.

Optimized Plate Design

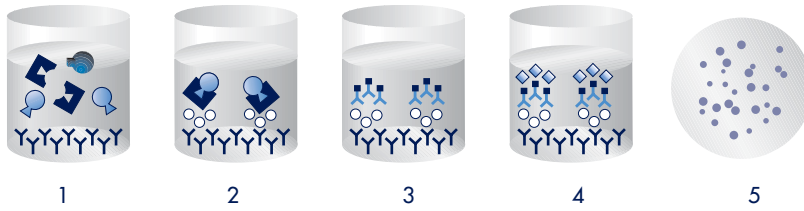
MultiScreen_{HTS} filter plates are designed for high performance Elispot assays. The plate design is optimized for improved membrane flatness to enhance in-well imaging. The plates are provided sterile and are constructed of low protein binding plastic. Each well is isolated and individually sealed to eliminate the occurrence of cross talk.

The plates are automation compatible and are in full compliance with ANSI/SBS 2004 standards. The plate design also features a removable underdrain for access to the membrane. Consistent results are seen within the plate and in plate-to-plate comparisons.



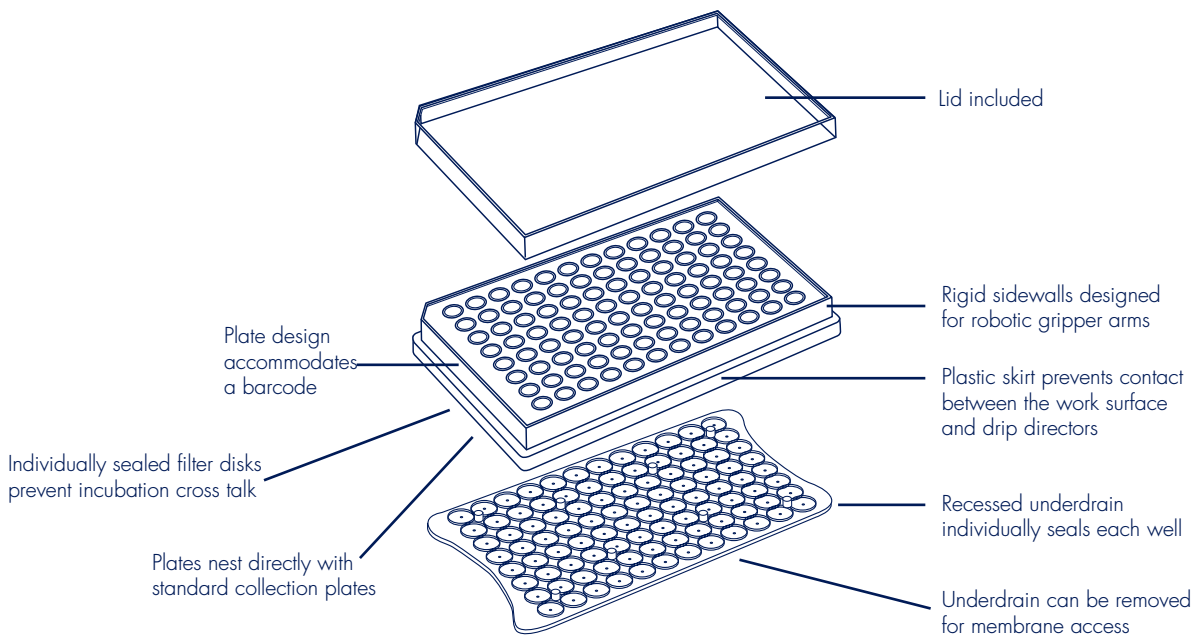
Protocol

Elispot Assay Procedure for the Detection of Cytokine in Response to a Stimulus



1. Coat membrane with antibodies. Add immune cells and incubate.
2. Responding cells produce cytokines. The cytokine of interest is then bound by the antibody.
3. Wash to remove cells. Add biotinylated antibodies which bind to the cytokine-antibody complex.
4. Add avidin-enzyme conjugate.
5. Add enzyme substrate and each responding cell will result in one spot.

New and Improved Plate Design



Performance

Uniform and Reproducible Spots

Optimized Membrane Gives Consistent Results Even in Corner and Edge Wells

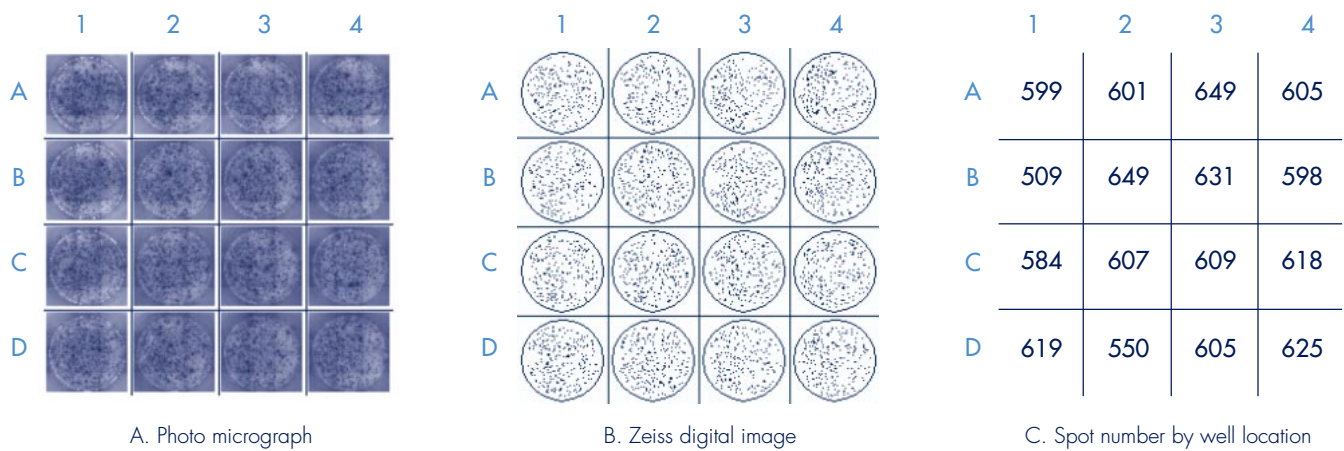


Figure 1. These images represent the number of cells secreting IFN- γ in response to PHA-L stimulation of Human Peripheral Blood Mononuclear cells (HPBMC). The wells were seeded with 50,000 cells and developed using BCIP/NBTplus substrate. The wells were imaged with the Zeiss KS Elispot imaging system. Typical MultiScreen_{HTS-IP} filter plate variability expressed by %CV* is less than 10%.

$$* \%CV = (SD/mean) * 100$$

Consistent Assay Results

Validated Elispot Assays Demonstrate Consistent Results Plate to Plate

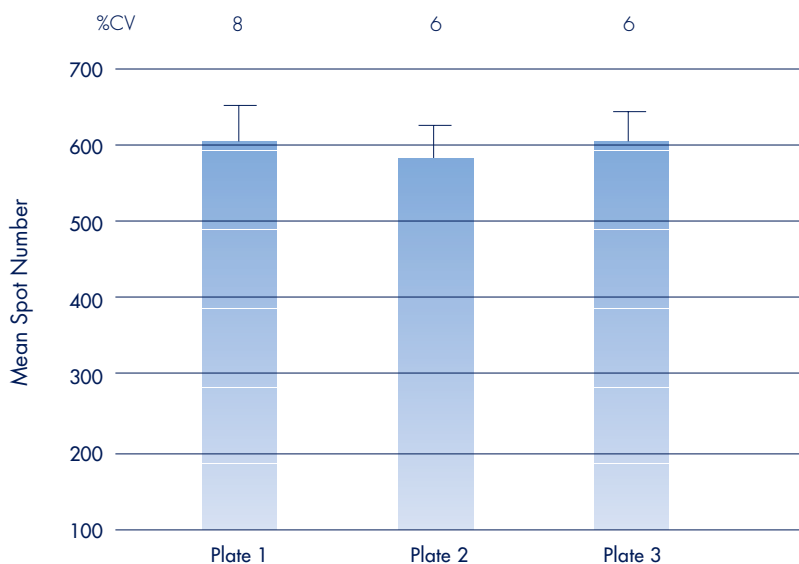


Figure 2. Three plates of MultiScreen_{HTS-IP} were run side by side in an Elispot assay using the same donor. The graph depicts the mean number of cells (HPBMC) per well that secreted IFN- γ in response to PHA-L stimulation (12 to 16 wells were tested per plate). The variability within each plate is shown and expressed as %CV.

Ordering Information

MultiScreen_{HTS} Filter Plates

Description	Sterile (yes/no)	Plate Material	Plate Color	Qty/Pk*	Catalogue no.
MultiScreen _{HTS} -IP Filter Plate	Yes	Acrylic	Clear	10	MSIP S45 10
with Immobilon-P membrane	Yes	Acrylic	White	10	MSIP S4W 10
MultiScreen _{HTS} -HA filter plate					
with MCE/nitrocellulose membrane	Yes	Styrene	Clear	10	MSHA S45 10

*Non-sterile bulk packs are also available. Contact Millipore for more information.

Also Available

Description	Sterile (yes/no)	Plate Material	Plate Color	Qty/Pk*	Catalogue no.
MultiScreen-IP Filter Plate	Yes	Acrylic	Clear	10	MAIP S45 10
with Immobilon-P membrane	Yes	Acrylic	White	10	S2EM 004 M99
MultiScreen-HA filter plate					
with MCE membrane	Yes	Styrene	Clear	10	MAHA S45 10

*Non-sterile bulk packs are also available. Contact Millipore for more information.

Accessories

Description	Qty/Pk	Catalogue no.
MultiScreen underdrain removal tool	1	MSPL RS9 60
Single-well punch kit for individual membrane removal	1	MELI PUN CH
Plate sealing tape, clear (100/pk)	100	MATA HCL 00

Further Information

TN1003EN00: IFN- γ Elispot Assays on MultiScreen-IP Plates, Technical Note

TN1075EN00: IFN- γ Elispot Assays on MultiScreen-HA Plates, Technical Note

To Place an Order or Receive Technical Assistance

For additional information call your nearest Millipore office:

In the U.S. and Canada,
call toll-free 1-800-MILLIPORE (1-800-645-5476)

In the U.S., Canada and Puerto Rico, fax orders to 1-800-MILLIFX
(1-800-645-5439)

Internet: www.millipore.com

Technical Service: www.millipore.com/techservice

Millipore, MultiScreen and Immobilon are registered trademarks of Millipore Corporation.

Lit. No. PF025EN00

Printed in U.S.A. 01/04 04-008

© 2004 Millipore Corporation, Billerica, MA.
All rights reserved.

MILLIPORE