Millipore®
Preparation, Separation,
Filtration & Monitoring Products

MultiScreen®$_{HTS}$ Glass Fiber Filter Plates

96-well and 384-well plates incorporate optimized glass fiber for assays including receptor-ligand binding

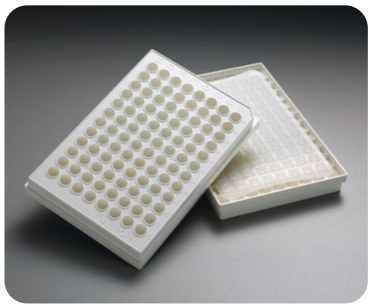
Innovative Plate Design

MultiScreen®$_{HTS}$ filter plates with glass fiber filter provide a proven solution for drug discovery applications.

The plates are fully compatible with automation and are designed to meet the 2025 ANSI/SBS standards for multiwell plates.

The HTS design for both 96- and 384-well plates incorporates rigid sidewalls aligned for easy handling by robotic gripper arms. They also provide ample surfaces for bar code labels.

The plate features protect the underdrain and eliminate surface contact with individual well "drip directors". The plastic skirt enables stacking directly with collection plates and improves the vacuum seal when used with a Millipore® vacuum manifold.



- Plate designs meet ANSI/SBS standards for microwell plates
- Optimized for receptor-ligand binding assays
- Easy scale-up from 96-well to 384-well assays
- High density formats conserve reagents and increase throughput.

Optimized for High Performance Drug Discovery

High throughput MultiScreen®$_{HTS}$ filter plates are optimized for high throughput bioassays. The plates incorporate glass fiber filter to support a range of applications including receptor-ligand binding and precipitation assays such as soluble receptor, enzyme and protein kinase.

For optimal results, use with a **MultiScreen®$_{HTS}$ vacuum manifold** is recommended.

Most Reliable Tool for Receptor-binding Assays

Filter-based separation technology is widely used to obtain necessary bound vs. free fractions for validation in receptor-ligand binding assays. This is a critical step in lead identification and later lead characterization processes.

MultiScreen® filter plates are recognized as an accurate and reliable alternative to homogenous assays. Glass fiber filters are incorporated to retain the receptor and "bound" ligand fraction.

MultiScreen®$_{HTS}$ filter plates are pre-validated for receptor-ligand binding assays. Read our technical article page: **High density receptor-ligand binding assays** for more information.

MilliporeSigma is the U.S. and Canada Life Science business of Merck KGaA, Darmstadt, Germany.

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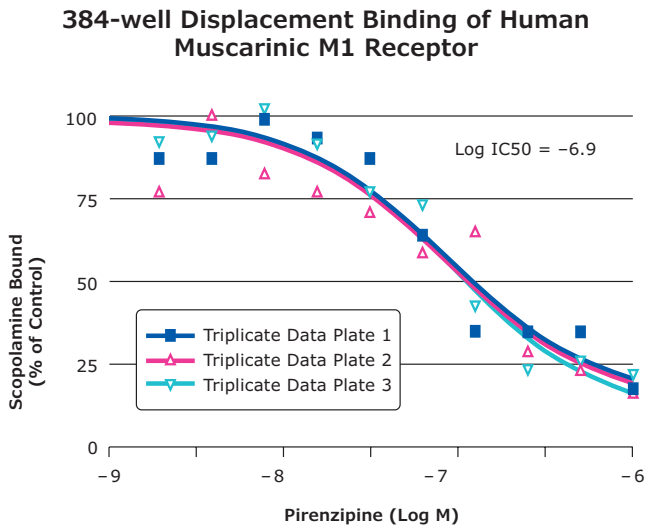
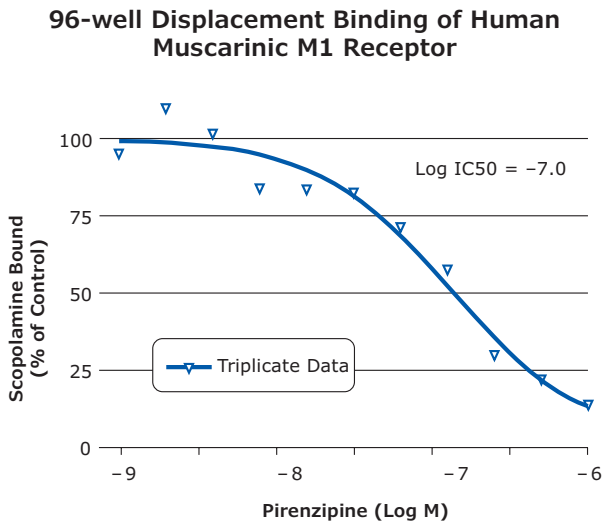
Easy Scale-up from 96-well Platforms

The MultiScreen®$_{HTS}$ 384-well filter plate provides a high density platform and offers the reagent-saving benefits of assay miniaturization. The automation-compatible plate is also a simple scale-up from 96-well assays.

Performance

Optimized Design for High Quality Results





Figures 1 and **2**. Radioligand binding displacement binding assays were performed with a constant radiolabeled scopolamine concentration (0.6 nM) and serial dilutions of unlabelled pirenzipine as compared to a control binding experiment without unlabelled pirenzipine (% of Control). **Left**: displacement binding done with 4.38 µg receptor preparation in 100 µL using MultiScreen®$_{HTS}$ 384-well filter plate. Results presented are from three separate experiments each performed in triplicate wells. **Right**: displacement binding done with 8.75 µg receptor preparation in 200 µL using MultiScreen® 96-well filter plate. Relative affinity values (IC50) were determined by fitting displacement binding inhibition values by non-linear regression using Prism ™ data software. All data points are the average of triplicate experiments. Filter plates were dried prior to the addition of Supermix™ (10 µL in 384-well plates and 50 µL in 96-well plates). Counting was done in a MicroBeta ® Trilux.

Note: All counting is done with underdrain on for both 96- and 384-well plates.

Specifications

	MultiScreen®$_{HTS}$ 384	MultiScreen®$_{HTS}$ 96
Materials of Construction		
Filter material:	Glass Fiber FB or FC	Glass Fiber FB or FC
Support:	Polyester mesh	0.65 µm Durapore® PVDF membrane
Filter plate:	White styrene acrylonitrile (SAN)/TiO_2	White Barex/TiO_2
Flow director:	Clear SAN	Natural polyethylene
Plate lid:	Polystyrene	Polystyrene
Dimensions		
Plate assembly length:	127.7 mm	127.7 mm
Plate assembly width:	85.5 mm	85.5 mm
Plate assembly depth (without lid):	14.4 mm	14.4 mm
Plate assembly depth (with lid):	16.9 mm	16.9 mm
Filter surface area:	0.09 cm²	0.26 cm²
Sample Volume per Well		
Recommended:	20–100 µL	50–250 µL
Maximum:	110 µL	300 µL
Recommended Vacuum Pressure		
Filter to waste:	8–20″ Hg	9–18″ Hg
Filter to receiver plate:	8–10″ Hg	8–10″ Hg
Recommended Centrifugal Force		
	500–1000 x g	1000 x g

Ordering Information

Description	Qty/Pk	Cat. No.
MultiScreen®$_{HTS}$ 96-well Filter Plate		
Glass Fiber FB	10	**MSFBN6B10**
	50	**MSFBN6B50**
Glass Fiber FC	10	**MSFCN6B10**
	50	**MSFCN6B50**
MultiScreen®$_{HTS}$ 384-well Filter Plate		
Glass Fiber FB	10	**MZFBNOW10**
	50	**MZFBNOW50**
Glass Fiber FC	10	**MZFCNOW10**
	50	**MZFCNOW50**
Accessories		
MultiScreen®$_{HTS}$ Vacuum Manifold		**MSVMHTS00**
Chemical duty vacuum pump	115 Volts, 60 Hz	**WP6111560**
	220 Volts, 50 Hz	**WP6122050**
Plate sealing tape	Clear	**MATAHCL00**
Vacuum flask, 1L		**XX1014705**

Custom MultiScreen® Filter Plates

In need of customized plates? We'll create the perfect plate for your assay, with a combination of filter membrane, housing material and other required specifications.

For more information about MultiScreen® filter plates, please visit: **SigmaAldrich.com/multiscreen**

To place an order or receive technical assistance:
SigmaAldrich.com/support

For local contact information:
SigmaAldrich.com/offices

MilliporeSigma
400 Summit Drive
Burlington, MA 01803

SigmaAldrich.com

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