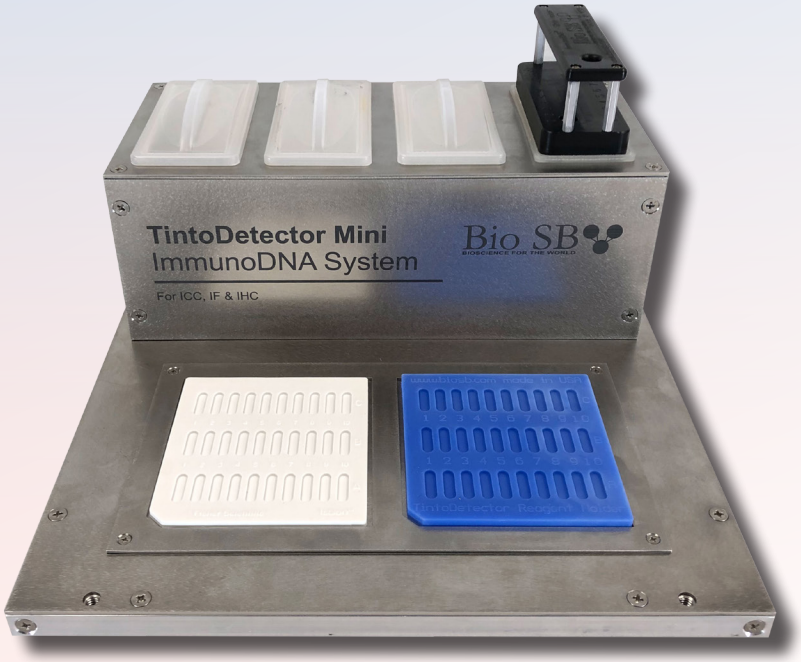
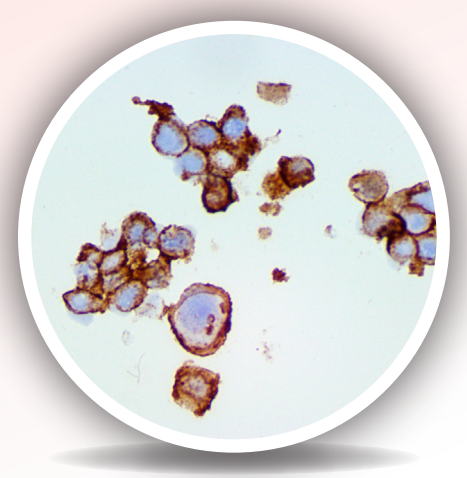
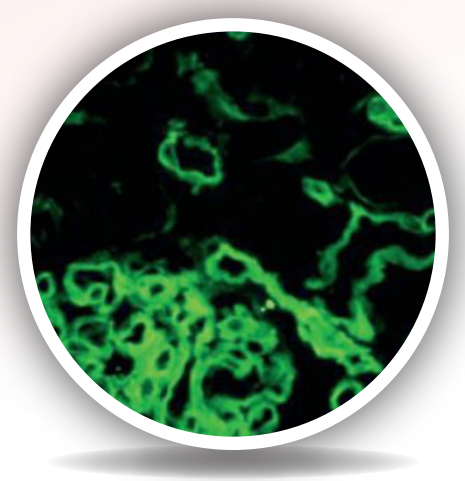
INSTRUCTION MANUAL
TINTODETECTOR MINI IMMUNO SYSTEM

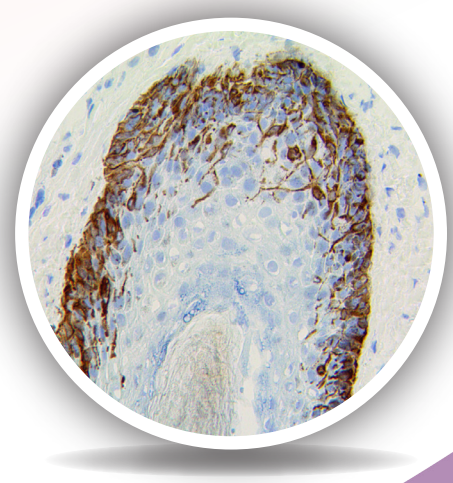
Bio SB
BIOSCIENCE FOR THE WORLD

Compact System for Immunocytochemistry, Immunofluorescence and Immunohistochemistry









EM 0003, Rev. A DCN 3696

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TintoDetector Mini Manual Table of Contents

Overview

The Bio SB TintoDetector Mini Immuno System is a capillary gap based system for use in Immunocytochemistry (ICC), Immunofluorescence (IF) and Immunohistochemistry (IHC). The TintoDetector Mini is an open system, and reagents from any supplier can be used.

The Bio SB TintoDetector Mini is comprised of several components, which can be found in the diagram below (Figure 1.1). The components of the TintoDetector Mini include:

1. TintoDetector Mini Immuno System (Qty: 1)_____BSB 7085
2. TintoDetector 30-Well Reagent Holders (Qty: 5)_____BSB 7004
3. TintoDetector Absorbent Pads (Qty: 10)_____BSB 7036
4. TintoDetector Slide Holder (Qty: 1, See Figure 1.2)_____ BSB 7003
5. TintoDetector Cap Gap Plus Slides (Box of 72, See Figure 1.3)_____ BSB 7006
6. Plastic Staining Dishes (Qty:4) _____ BSB 7009

Figure 1.1

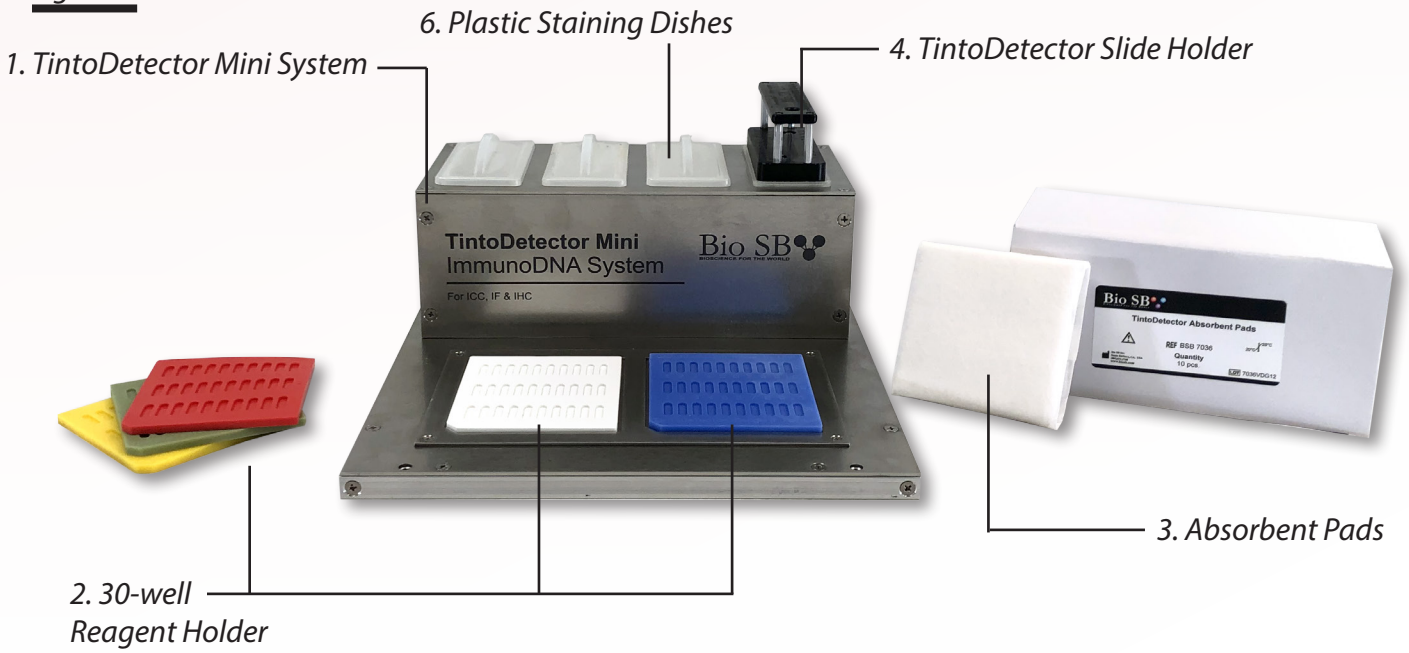


Figure 1.2

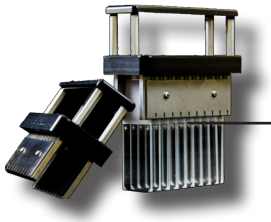


Figure 1.3

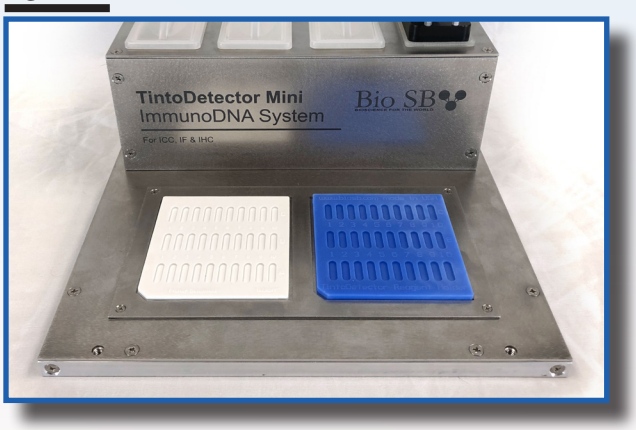
TintoDetector Mini Components

Stainless Steel Workstation

See Figure 2.1

The TintoDetector Mini ImmunoDNA System is constructed out of stainless steel for sustained durability. It also provides a small footprint for easy installation or relocation.

Figure 2.1

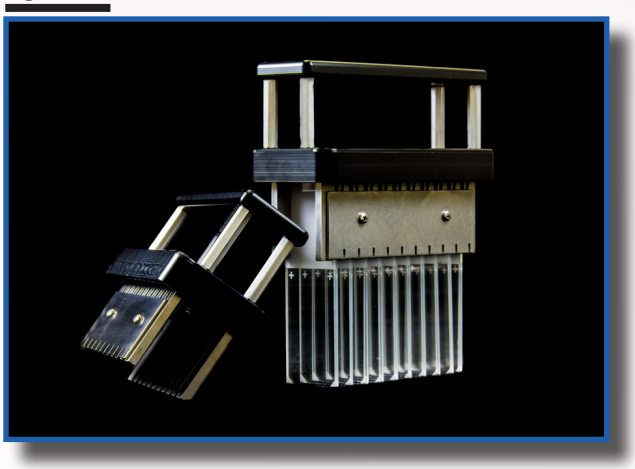


TintoDetector Slide Holder

See Figure 2.2

The TintoDetector Slide Holder is an extremely durable capillary gap slide holder that is capable of holding 20 capillary gap slides, and easily fits into the TintoDetector Incubator.

Figure 2.2

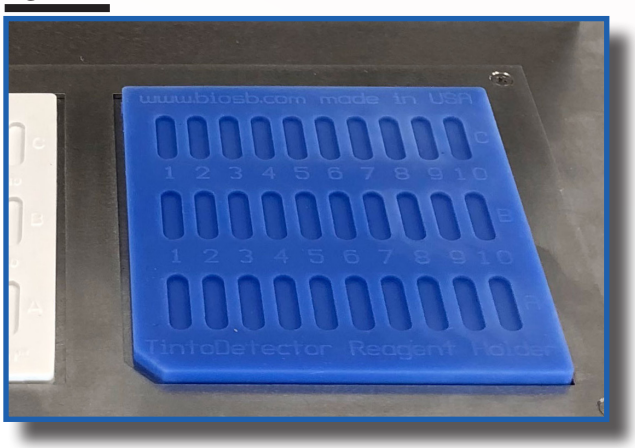


TintoDetector 30 Well Reagent Holder

See Figure 2.3

The TintoDetector 30-Well Reagent Holder allows for the application of up to 200 micro-liters of reagent to a paired set of slides. The 30-well reagent holders can be used to apply any reagent used in IHC protocols.

Figure 2.3



TintoDetector Mini Components (Continued)

Figure 2.4

Staining Dish Rack
See Figure 2.4

All TintoDetector staining dishes are capable of holding solutions such as buffers, or special stains for use in the IHC protocols. All staining dishes are capable of holding 200 mL of solution.

TintoDetector Mini Specifications

TintoDetector Dimensions	11.5in. x 11.75in. x 4.5in. (29.2cm. x 30.5cm. x 11.4cm.)
TintoDetector Weight	6 pounds (2.8kg)
Supported Protocols	Immunocytochemistry (IC), Immunofluorescence (IF) and Immunohistochemistry (IHC)

Installation and Guidlines

Ensure unit is placed on a level surface.

Always use proper safety guidelines when working with toxic and flammable reagents in your laboratory. All protocols listed within the TintoDetector Mini manual are guidelines only, and are meant as a sample application of the TintoDetector Mini. Always reference the supplier manual before using the TintoDetector Mini.

Installation Checklist

Upon receiving your TintoDetector system, ensure that all necessary parts are included:

- ☐ TintoDetector Mini Base Station (1)
- ☐ TintoDetector Slide Holder (1)
- ☐ TintoDetector 30-Well Reagent Holder (5)
- ☐ TintoDetector Staining Dishes and Lids(4)
- ☐ TintoDetector Absorbent Pads (1 Box of 10)
- ☐ TintoDetector Cap Gap Plus Slides (1 box of 72)

Installation Procedure

- ☐ Place base station on level surface.
- ☐ Place 30-Well Reagent Holders on base station.
- ☐ Place staining dishes in base station.
- ☐ Fill staining dishes with 200 mL reagent. Leave one staining dish empty as an incubation support.

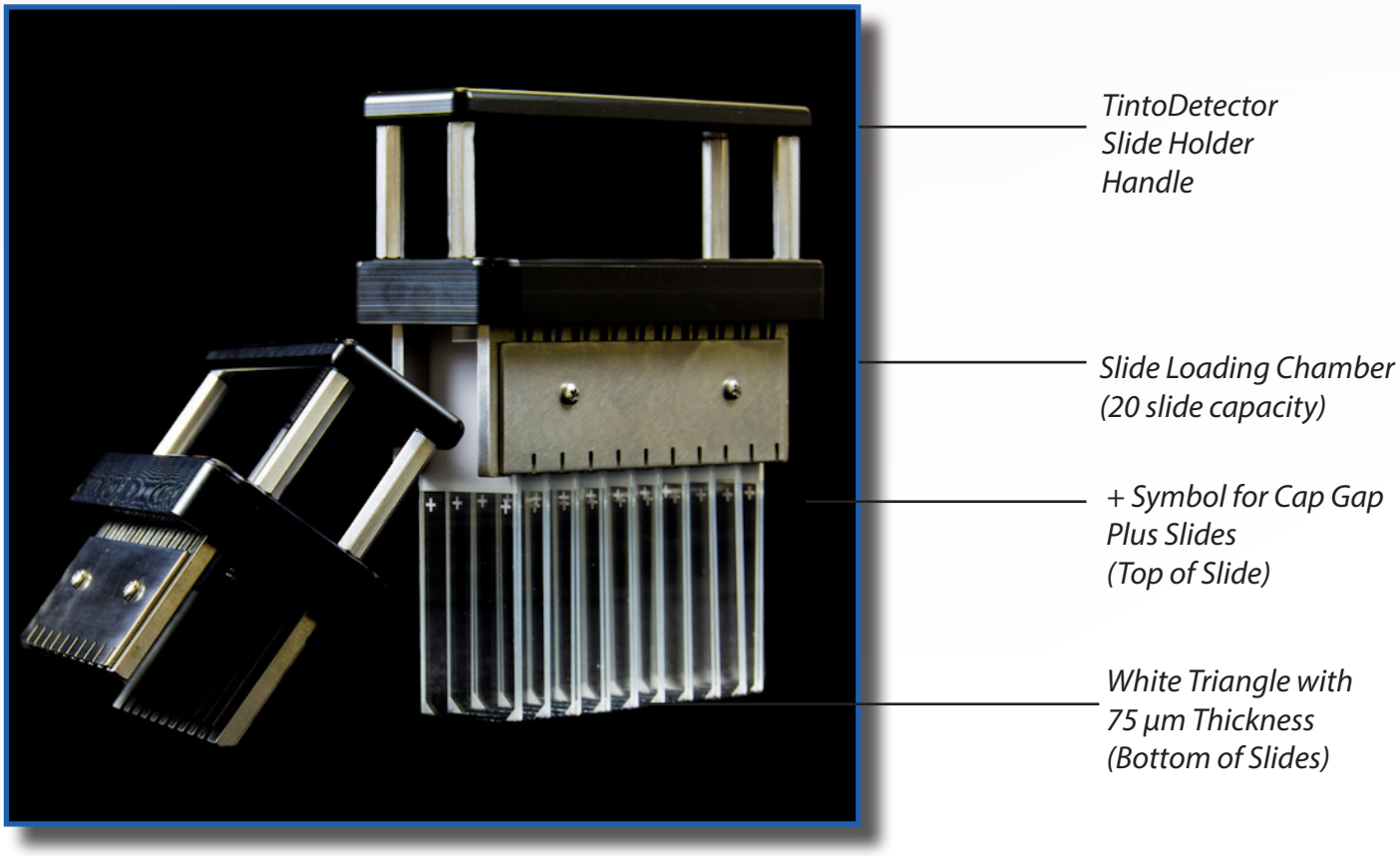
TintoDetector Slide Holder

See Figure 3.2

The TintoDetector Mini System uses a specially designed capillary gap slide with raised white triangles (75 µm) at the bottom of the slide (see figure 3.2). When two cap gap slides are paired across from each other face-to-face, a 150 µm cap gap is created where reagents are drawn, allowing exposure to the specimens. When using the TintoDetector Slide Holder, ensure that the following procedures are followed...

- Slides are paired face to face.
- If a single slide or odd number must be used, pair with a blank slide.
- Insert slides so that portion of slide with white triangle faces downward when unit is held.
- Ensure that TintoDetector Cap Gap Slides or TintoDetector Cap Gap Plus Slides are used.
- Ensure all bottom edges of slides are aligned to ensure proper capillary gap action.
- Up to 20 capillary gap slides can be used in one TintoDetector Slide Holder.

Figure 3.2

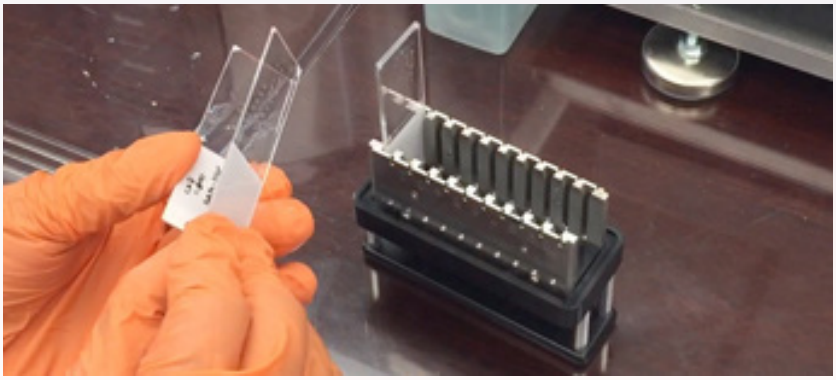


TintoDetector Mini Wash Procedure

The TintoDetector Slide Holder, TintoDetector Cap Gap Plus Slides, 30-Well Reagent Holder and TintoDetector Absorbent Pads are used in unison to draw reagent as well as perform washes.

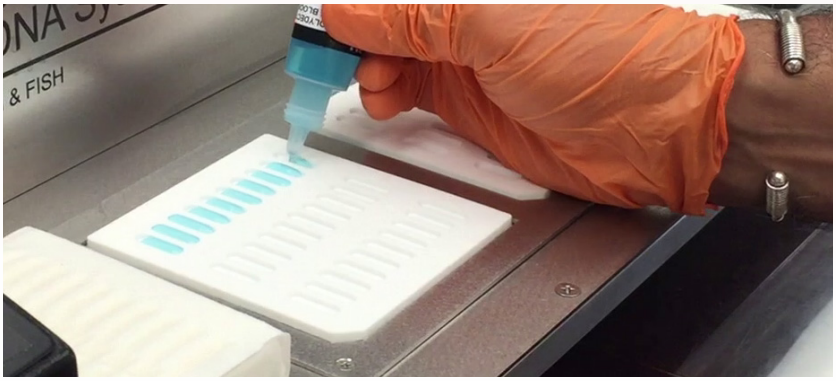
Step 1 - Load Slides

Load slides in TintoDetector Holder, face to face and properly ordered.



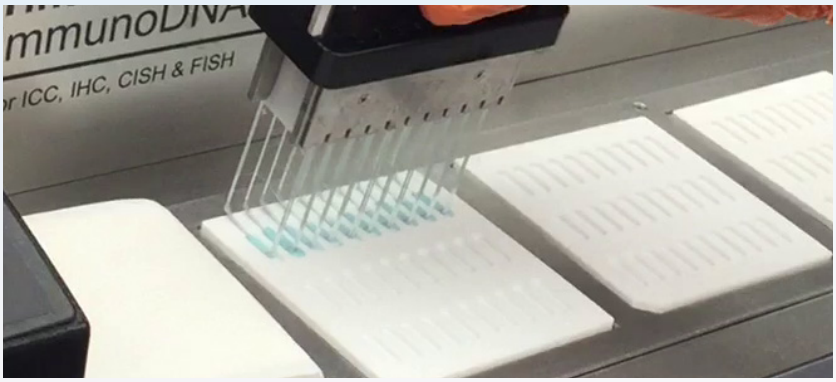
Step 2 - Apply Reagents to Reagent Holder

Apply reagent to TintoDetector 30-well Reagent Holder. Each reagent well can hold about 200 micro-liters of reagent.



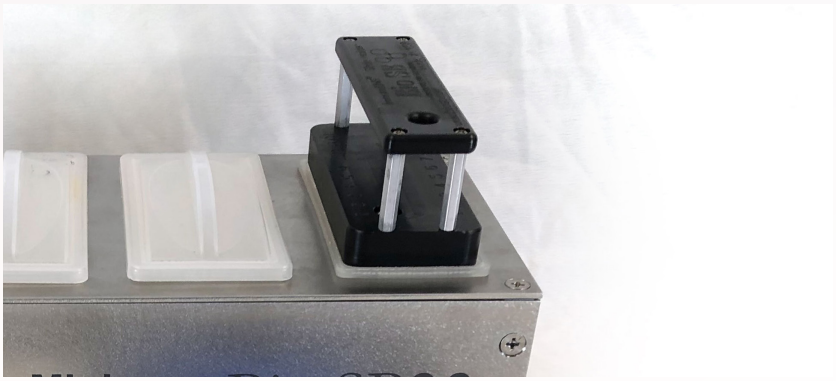
Step 3 - Draw Reagents into Slides

Place TintoDetector slide holder over 30-well reagent holder at an angle, ensuring that reagents line up with slides. Press slide holder against reagent holder. Capillary gap action will draw reagent. Transfer TintoDetector Slide Holder to an empty staining dish used as a support.



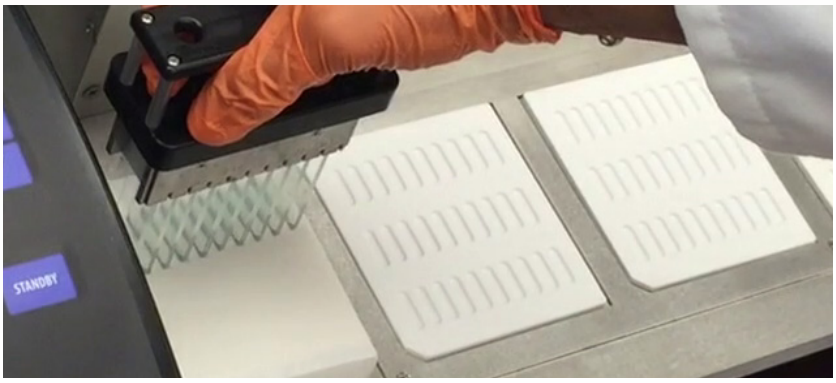
Step 4 - Incubate

Incubate Slide Holder using an empty staining dish.



Step 5 - Rinse

After the reagent incubation, eliminate the used reagent into an absorbent pad, then draw washing buffer into the capillary space and repeat the washing process 3 to 5 times. After washing proceed to draw the next step reagent for another incubation.



Additional Information

If you would like additional resources on how your TintoDetector Mini system can be used, feel free to visit the following sites:

YouTube

- Our You Tube channel contains up-to-date information about your TintoDetector as well as video tutorials on how your TintoDetector can be used with different reagents and protocols.
- Channel URL: http://www.biosb.com/technical-resources/videos/

Web

- Our website strives to have the most up-to-date information for your needs. Additionally our website lists IHC, ICC and IF reagents that can be used with your TintoDetector Mini system.
- Channel URL: http://www.biosb.com

Support

- Email: sales@biosb.com

International Distribution

- Our most up to date list of distributors is available at www.biosb.com/distributors

TintoDetector Mini Accessories

All the components below are compatible with the TintoDetector Mini system.

TintoRetriever Pressure Cooker

BSB 7008

The TintoRetriever Pressure Cooker with built-in temperature gauge allows for quick and efficient epitope and nucleic acid retrieval for all IHC, ICC, IF, CISH and FISH protocols.

Bio SB IHC Detection Systems
Bio SB TintoAntibodies

All Bio SB IHC ancillaries, chromogens, counter-stains, biotin & polymer detection systems are compatible with the TintoDetector. Additionally all Bio SB ready-to-use TintoAntibodies are compatible with the TintoDetector Mini.

Bio SB TintoDetector ImmunoDNA System

BSB 7000

A larger format than the Bio SB TintoDetector Mini. The full size TintoDetector ImmunoDNA System includes an incubator, which is typically used in CISH and FISH protocols that involve denaturing of nucleic acids, probe hybridization, and other steps related to CISH/FISH implementation.

Bio SB Automated TintoStainer

BSB 7034

Need an automated IHC system to complement your TintoDetector? The Bio SB TintoStainer is capable of automated IHC/ICC/IF and uses digital bar code printing and scanning to ensure protocol accuracy and fast turnaround time.

TintoDetector Mini
Sample Applications

The following pages highlight some protocols for use in IHC applications. The protocols on the following pages are meant to serve as guidelines which highlight the flexibility and openness that the TintoDetector Mini offers end-users.

Always refer to the manufacturer's supplied technical procedures whenever performing any IHC protocol.

Sample IHC Mohs PolyDetector DAB HRP Brown or HRP Green Detection System Protocol

Mouse Mouse/Rabbit PolyDetector DAB HRP Brown Detection System - Catalog Number: BSB 0309
Mouse Mouse/Rabbit PolyDetector HRP Green Detection System - Catalog Number: BSB 0312

Note: If no temperature specified, assume room temperature.

	Step	Solution	Time/Temp (°C)
☐	Pair Capillary Gap Slides	Not Applicable	Not Applicable
☐	Wash	ImmunoWasher	3 x 10″
☐	Peroxidase Block	Peroxidase Block	1 x 30 Seconds
☐	Wash	ImmunoWasher	3 x 10″
☐	Primary Antibody	Primary Antibody	1 x 2 or 4 Minutes
☐	Wash	ImmunoWasher	3 x 10″
☐	HRP Label	HRP Label	1 x 1 or 3 Minutes
☐	Wash	ImmunoWasher	5 x 10″
☐	DAB or HRP Green *	DAB / HRP Green Substrate-Chromogen *	1 x 1 or 3 Minutes
☐	Wash	ImmunoWasher	5 x 10″
☐	Counter Stain	Hematoxylin	1 x 30″
☐	Wash	ImmunoWasher	5 x 10″
☐	Mount	AquaMounter or PermaMounter	Not Applicable

** DAB / HRP Green Chromogen Preparation = 1mL of Buffer : 1 Drop of Chromogen. Mix and use.*

Note: Incubation times, antibody, chromogen, and kit components will vary by vendor, application, and use. Remember to read all instructions that come with detection kit to ensure accurate implementation of protocol. The protocol provided above is used solely to demonstrate the TintoDetector's ability to handle IHC.

Sample IHC PolyDetector DAB HRP Brown Detection System Protocol

Bio SB Mouse/Rabbit PolyDetector DAB HRP Brown Detection System
Catalog Number: BSB 0205

Note: If no temperature specified, assume room temperature.

	Step	Solution	Time/Temp (°C)
☐	Deparaffinize	Xylenes	3 x 3′
☐	Rehydrate	Alcohols	3 x 3′
☐	Hydrate	Distilled Water	1 x 5″
☐	Wash	ImmunoWasher	1 x 2′
☐	Heat Pretreatment	HIER Solution	1 x 15′ in Pressure Cooker
☐	Cool	HIER Solution	1 x 20′ @ Room Temp.
☐	Pair Capillary Gap Slides	Not Applicable	Not Applicable
☐	Wash	ImmunoWasher	5 x 10″
☐	Peroxidase Block	Peroxidase Block	1 x 5′ @ 37°C
☐	Wash	ImmunoWasher	5 x 10″
☐	Primary Antibody	Primary Antibody	1 x 45-60′ @ 37°C
☐	Wash	ImmunoWasher	5 x 10″
☐	HRP Label (Polymer)	HRP Label (Polymer)	1 x 45′ @ 37°C
☐	Wash	ImmunoWasher	5 x 10″
☐	DAB*	DAB Chromogen*	1 x 5-10′ @ 37°C
☐	Wash	ImmunoWasher	5 x 10″
☐	Counter Stain	Hematoxylin	1 x 30″
☐	Wash	ImmunoWasher	5 x 10″
☐	Dehydrate	Alcohol	3 x 2′
☐	Prepare for Mount	Xylene	3 x 2′
☐	Mount	PermaMounter	Not Applicable

** DAB Chromogen Preparation = 1mL of Substrate : 1 Drop of Chromogen. Mix and use.*

Note: Incubation times, antibody, chromogens, and kit components will vary by vendor, application, and use. Remember to read all instructions that come with detection kit to ensure accurate implementation of protocol. The protocol provided above is used solely to demonstrate the TintoDetector's ability to handle IHC.

Sample IHC PolyDetector Plus DAB HRP Brown Detection System Protocol

Bio SB Mouse/Rabbit PolyDetector Plus DAB HRP Brown Detection System
Catalog Number: BSB 0261

Note: If no temperature specified, assume room temperature.

	Step	Solution	Time/Temp (°C)
☐	Deparaffinize	Xylenes	3 x 3′
☐	Rehydrate	Alcohols	3 x 3′
☐	Hydrate	Distilled Water	1 x 5″
☐	Wash	ImmunoWasher	1 x 2′
☐	Heat Pretreatment	HIER Solution	1 x 15′ in Pressure Cooker
☐	Cool	HIER Solution	1 x 20′ @ Room Temp.
☐	Pair Capillary Gap Slides	Not Applicable	Not Applicable
☐	Wash	ImmunoWasher	5 x 10″
☐	Peroxidase Block	Peroxidase Block	1 x 5′ @ 37°C
☐	Wash	ImmunoWasher	5 x 10″
☐	Primary Antibody	Primary Antibody	1 x 30-60′ @ 37°C
☐	Wash	ImmunoWasher	5 x 10″
☐	Link	Mouse/Rabbit Link	1 x 15′ @ 37°C
☐	Wash	ImmunoWasher	5 x 10″
☐	HRP Label (Polymer)	HRP Label (Polymer)	1 x 15′ @ 37°C
☐	Wash	ImmunoWasher	5 x 10″
☐	DAB*	DAB Chromogen*	1 x 5-10′ @ 37°C
☐	Wash	ImmunoWasher	5 x 10″
☐	Counter Stain	Hematoxylin	1 x 30″
☐	Wash	ImmunoWasher	5 x 10″
☐	Dehydrate	Alcohol	3 x 2′
☐	Prepare for Mount	Xylene	3 x 2′
☐	Mount	PermaMounter	Not Applicable

** DAB Chromogen Preparation = 1mL of Substrate : 1 Drop of Chromogen. Mix and use.*

Note: Incubation times, antibody, chromogens, and kit components will vary by vendor, application, and use. Remember to read all instructions that come with detection kit to ensure accurate implementation of protocol. The protocol provided above is used solely to demonstrate the TintoDetector's ability to handle IHC.

Sample IHC ImmunoDetector DAB HRP Brown Detection System Protocol

Bio SB Mouse/Rabbit ImmunoDetector DAB HRP Brown Detection System
Catalog Number: BSB 0005

Note: If no temperature specified, assume room temperature.

	Step	Solution	Time/Temp (°C)
☐	Deparaffinize	Xylenes	3 x 3′
☐	Rehydrate	Alcohols	3 x 3′
☐	Hydrate	Distilled Water	1 x 5″
☐	Wash	ImmunoWasher	1 x 2′
☐	Heat Pretreatment	HIER Solution	1 x 15′ in Pressure Cooker
☐	Cool	HIER Solution	1 x 20′
☐	Pair Capillary Gap Slides	Not Applicable	Not Applicable
☐	Wash	ImmunoWasher	5 x 10″
☐	Peroxidase Block	Peroxidase Block	1 x 5′ @ 37°C
☐	Wash	ImmunoWasher	5 x 10″
☐	Primary Antibody	Primary Antibody	1 x 30-60′. @ 37°C
☐	Wash	ImmunoWasher	5 x 10″
☐	Biotin Link	Biotin Link	1 x 10′ @ 37°C
☐	Wash	ImmunoWasher	5 x 10″
☐	HRP Label	HRP Label	1 x 10′ @ 37°C
☐	Wash	ImmunoWasher	5 x 10″
☐	DAB*	DAB Chromogen*	1 x 5-10′ @ 37°C
☐	Wash	ImmunoWasher	5 x 10″
☐	Counter Stain	Hematoxylin	1 x 30″
☐	Wash	ImmunoWasher	5 x 10″
☐	Dehydrate	Alcohol	3 x 2′
☐	Prepare for Mount	Xylene	3 x 2′
☐	Mount	PermaMounter	Not Applicable

** DAB Chromogen Preparation = 1mL of Substrate : 1 Drop of Chromogen. Mix and use.*

Note: Incubation times, antibody, chromogen, and kit components will vary by vendor, application, and use. Remember to read all instructions that come with detection kit to ensure accurate implementation of protocol. The protocol provided above is used solely to demonstrate the TintoDetector's ability to handle IHC.

TintoDetector Mini Troubleshooting

Q: My TintoDetector Mini has arrived an there are missing parts/components to the machine. How do I receive replacement parts?

A: Contact Bio SB as soon as possible, either via email, phone, or fax. Explain which part you are missing and Bio SB will gladly make arrangements to send you replacement parts.

Q: My TintoDetector Mini has arrived and there are damaged parts.

A: Contact Bio SB as soon as possible, either via email, phone, or fax. Explain which part is damaged and Bio SB will gladly make arrangements to send you replacement parts.

Q: My solution is leaking out of the TintoDetector Mini.

A: Inspect unit to see if the staining dishes are damaged. If a staining dish is damaged/defective, contact Bio SB for a replacement unit.

Q: Why is my solution is not drawing up the TintoDetector Slide Holder?

A: Ensure that you are using TintoDetector Cap Gap or TintoDetector Cap Gap Plus Slides with the TintoDetector Slide Holder. Also ensure that your slides are facing each other when paired, and that all slides are aligned.

Q: Bubbles form on my slides. How do I remove them?

A: We recommend that slides which form bubbles be washed in 100% Ethanol solution 5 times, followed by wash in Bio SB ImmunoWasher 10 times.

Q: My protocol isn't listed in the previous pages, can I still use the TintoDetector Mini?

A: Yes! The TintoDetector Mini is an open system, so you can use any IHC protocol you wish.

Q: What if I have additional questions?

A: Feel free to contact Bio SB using the following information:

Bio SB Inc.
69 Santa Felicia Drive, Santa Barbara, CA 93117, USA
Tel (USA): 1-800-561-1145 | Tel (Int): +1-805-692-2768 | Fax: 805-692-2769
E-mail: sales@biosb.com | Website: www.biosb.com