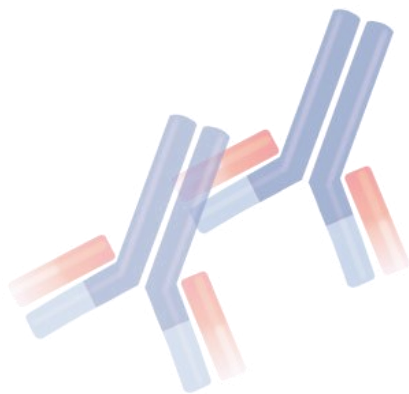
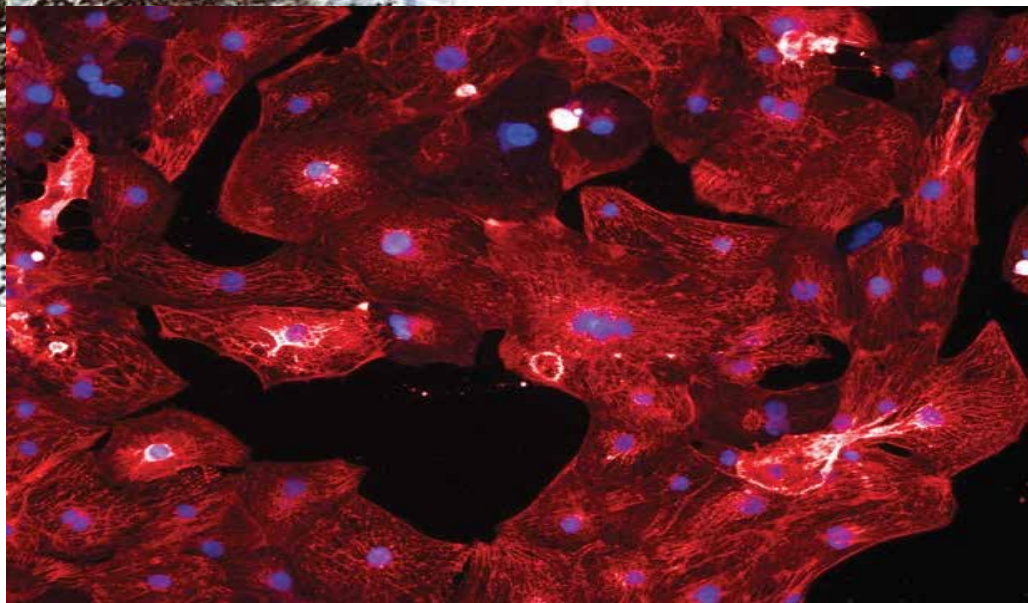
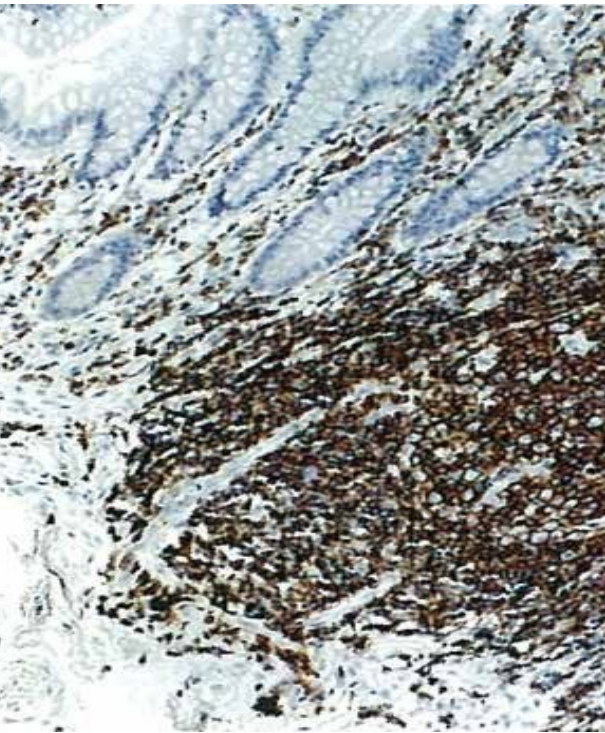


# *Immunohistochemistry*

# *Immunocytochemistry*



Antigen Retrieval:	No damage to antigen
Blocking:	High blocking efficiency
Antifade:	Non-hardening
Antibody Diluent:	Signal enhancer
Chromogenic Detection:	Simple staining
Alkaline Phosphatase Substrate:	BCIP-NBT Solution
Leak-resident Seal:	IHC Fencing Seal
Anti GFP antibody:	Rat monoclonal



# Antigen Retrieval Solution

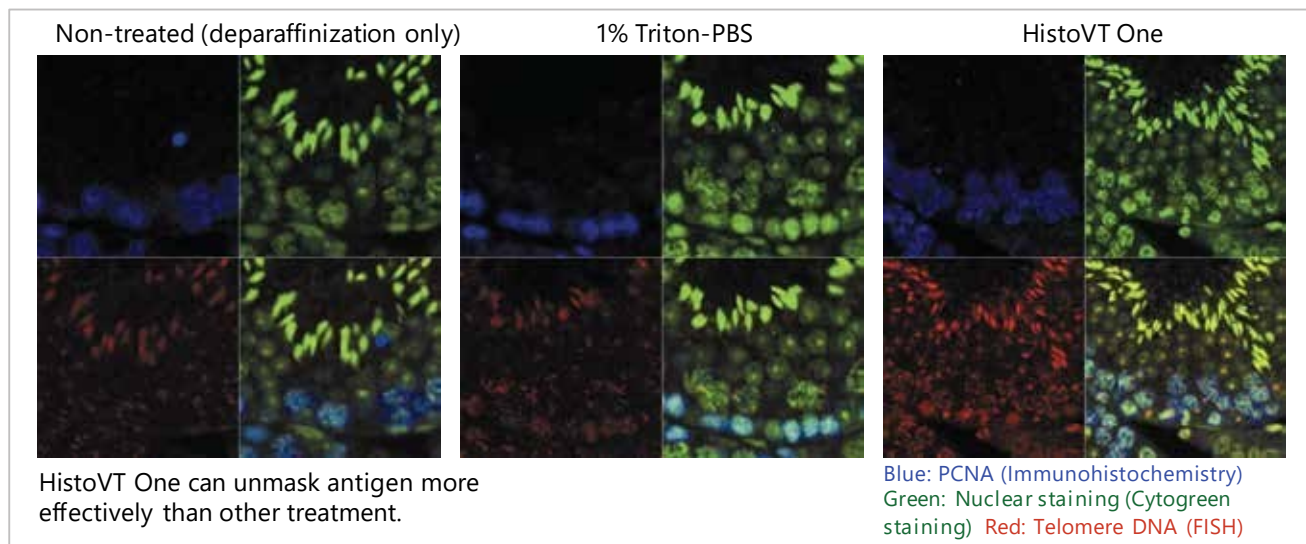
## HistoVT One



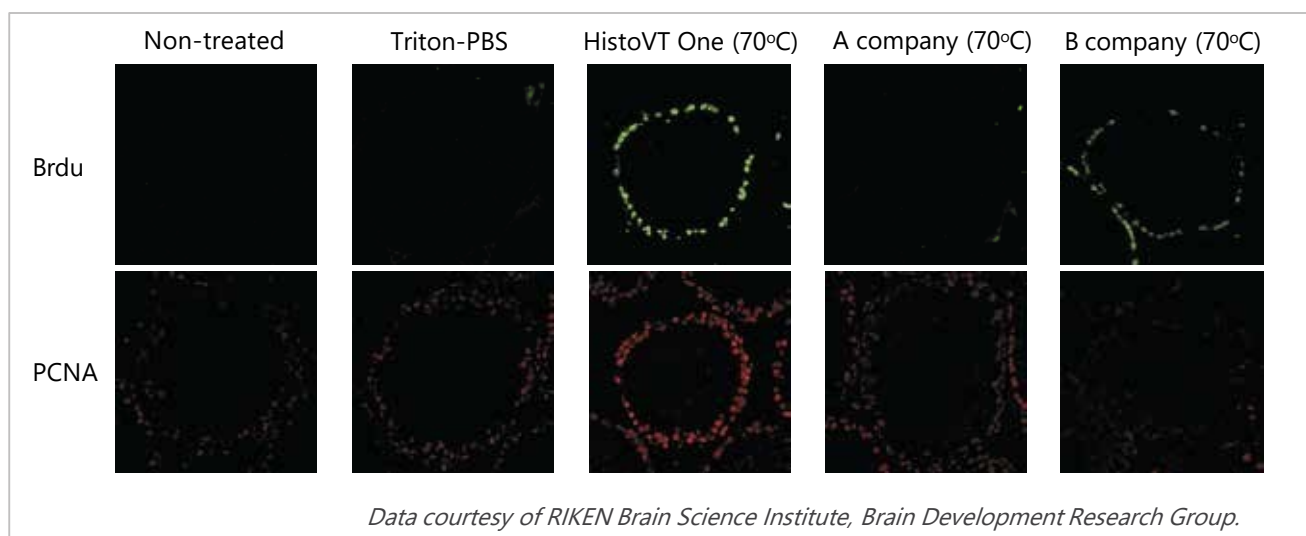
### Features

- Enhancing antigen-antibody reaction
- Applicable to frozen or paraffin-embedded tissue sections
- High reproducibility

### Application Data 1: Formalin-fixed, paraffin-embedded tissue sections



### Application Data 2: Frozen sections



### Ordering Information

Product Name	Storage	Cat. No.	PKG Size
HistoVT One (10X, pH 7.0)	RT	06380-76	100 ml
		06380-05	500 ml



# Blocking Solution

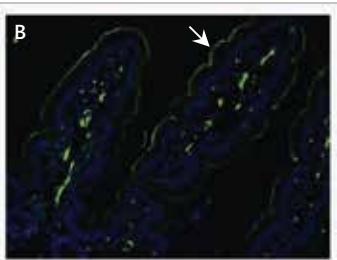
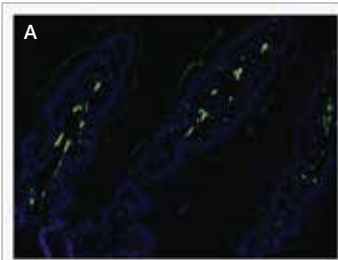
## Blocking One Histo



### Features

- Easy-to-use: eye-drop bottle
- Safe: the preservative does not affect the activity of alkaline phosphate or horseradish peroxidase

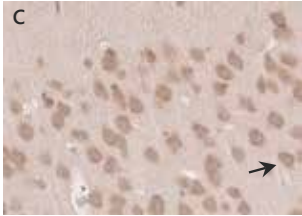
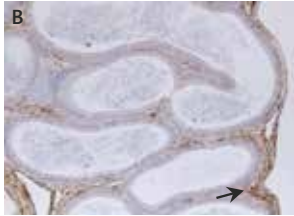
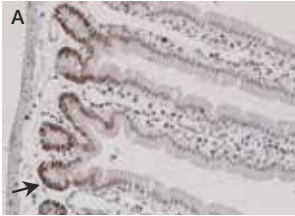
### Comparison of blocking efficient with 10% Goat Serum (immunofluorescence)



Blocking One Histo (10 min.)      10% Goat Serum (10 min.)

In both panels, mouse small intestine tissue section was stained with secondary antibody conjugated with CF™ 488A (green) and counter stained with DAPI (blue). In the panel B with 10% Goat Serum, the stained white arrow along the lines of shape of small intestine show non-specific staining. Blocking One Histo is more effective at reducing non-specific background staining than normal serum.

### Application Data



A: Mouse small intestine (PCNA) x5  
B: Mouse epididymis (Vimentin) x25  
C: Mouse brain (GluR) x100

Blocking treatment of each tissue section had been performed by Blocking One Histo. Mouse small intestine (panel A) was stained with anti-PCNA and DAB (3,3'-Diamino Benzidine) to stain nuclear (black arrow), Mouse epididymis (panel B) was stained with anti-Vimentin and DAB to stain muscle (black arrow), Mouse brain (panel C) was stained with anti-GluR and DAB to stain membrane proteins (black arrow) and counter stained with hematoxylin.

### Ordering Information

Product Name	Storage	Cat. No.	PKG Size
Blocking One Histo	4°C	06349-64	50 ml

#### Related Products

Product Name	Storage	Cat. No.	PKG Size
Blocking One	4°C	03953-66	100 ml
		03953-95	500 ml
Blocking One-P (for Immunoassays with Phospho-specific Antibodies)	4°C	05999-84	200 ml

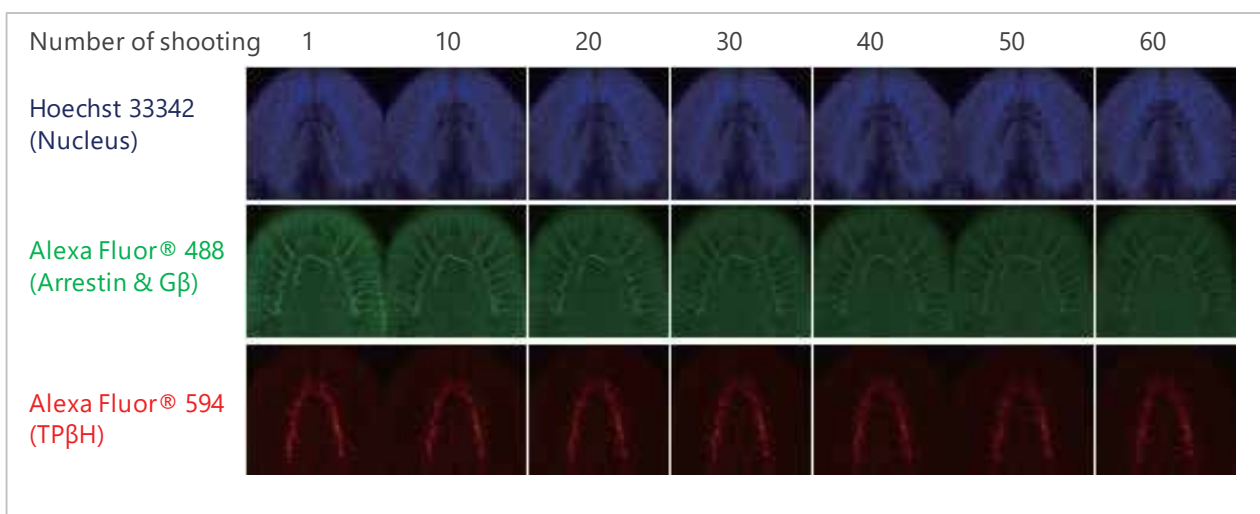
# Mounting Medium for Fluorescent Staining Fluoro-KEEPER Antifade Reagent, Non-hardening Type



## Features

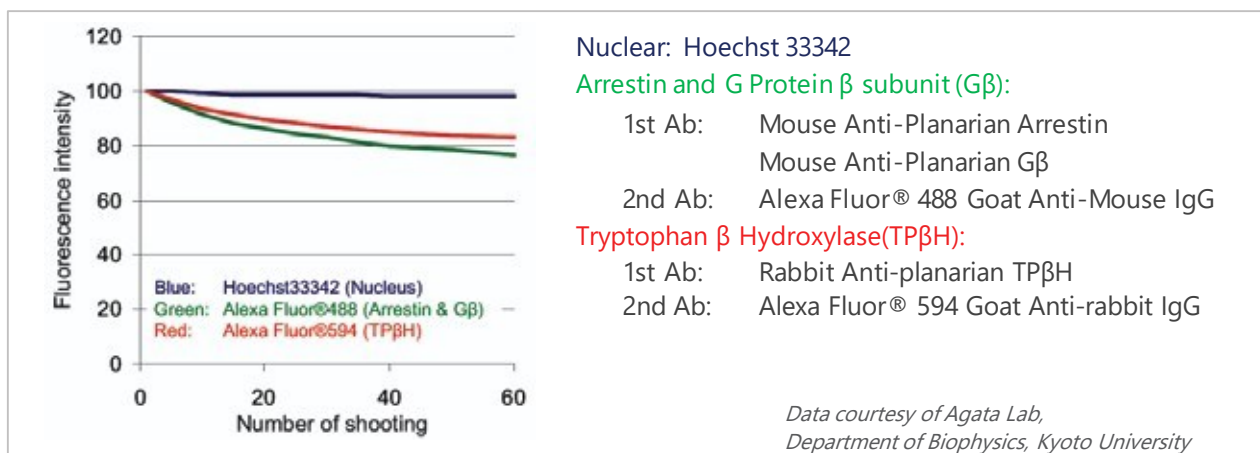
- Inhibits photobleaching of various fluorochromes
- Easy to use with eye-drop bottle
- Non-hardening type
- Available with or without DAPI

## Fluoro-KEEPER (without DAPI) : Fluorescent microscopy experiments - Planarian



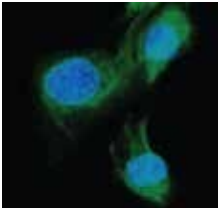
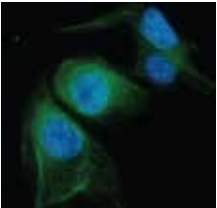
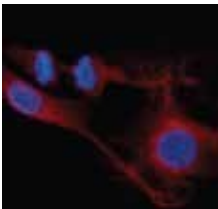
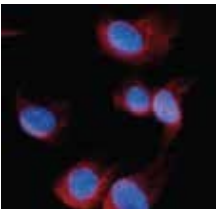
### Fluorescence intensities

Fluorescence intensities are shown as percentages of initial intensities remaining during repeated frame capture up to 60 times. The images were acquired by Olympus FV10. The samples mounted in the Fluoro-KEEPER Antifade Reagent were clearly detected after 60 times of frame capture.



### Fluorescent microscopy observation in 3 months

The samples mounted in Fluoro-KEEPER Antifade Reagent without DAPI can be stored for long-term when the coverslip are completely sealed with nail polish.

	Right after mounting	3 months later	
DAPI (Nucleus) CF™ 488 (Vimentin)			Sealing: Nail polish Storage: 3 months at 4°C, protected from light Sample: MC3T3-E1 cell (Fixation: 4%-Paraformaldehyde Phosphate Buffer Solution (Cat. No.: 09154) for 15 min. at RT) Retrieval: HistoVT One (Cat. No.: 06380) for 30 min. at 90°C) Blocking: Blocking One Histo (Cat. No.: 06349) 1st Ab: Anti-Vimentin Rabbit Polyclonal Antibody (Santa Cruz, Cat. No.: sc-7557R) 2nd Ab: CF™ 488A Goat Anti-Rabbit IgG (H+L), F(ab')2 Fragment (Biotium, Cat. No.: 20013) CF™ 555 Goat Anti-Rabbit IgG (H+L) (Biotium, Cat. No.: 20033) Nuclear Staining: DAPI (Cat. No.: 11034), Hoechst 33258 (Cat. No.: 04907)
Hoechst 33258 (Nucleus) CF™ 555 (Vimentin)			

### Comparison of antifade effectiveness with different fluorescent dyes

Cells stained by each fluorescent dye were mounted in Fluoro-KEEPER Antifade Reagent, 85% Glycerol containing PBS as a control. Samples were illuminated for 60 seconds. Each number indicates fluorescence intensity as percentage of initial intensity after 60 seconds exposure photobleaching.

Fluorescent Dye	without DAPI		with DAPI		
	Fluoro-KEEPER	Control	Fluoro-KEEPER	Control	
Hoechst 33258	98 %	96 %	-	-	Control Condition: 85 % Glycerol-PBS
Hoechst 33342	100 %	90 %	-	-	
DAPI	99 %	93 %	-	-	Fluorescent Microscopy: Olympus BX-50-34-FLA1
Propidium Iodide	95 %	67 %	-	-	
Fluorescein	97 %	49 %	96 %	49 %	Exposure Time: 60 seconds
Alexa Fluor® 488	93 %	86 %	96 %	91 %	
CF™ 488	93 %	82 %	91 %	82 %	
Cy® 2	99 %	83 %	98 %	81 %	
Rhodamine	72 %	51 %	78 %	41 %	
Alexa Fluor® 555	98 %	81 %	97 %	87 %	
CF™ 555	98 %	85 %	97 %	85 %	
Cy® 3	89 %	71 %	86 %	66 %	

### Ordering Information

Product Name	Storage	Cat. No.	PKG Size
Fluoro-KEEPER Antifade Reagent, Non-Hardening Type	4°C	12593-64	2 x 5 ml
Fluoro-KEEPER Antifade Reagent, Non-Hardening Type with DAPI	4°C	12745-74	2 x 5 ml

# Antibody Diluent for Signal Enhancer Signal Enhancer HIKARI

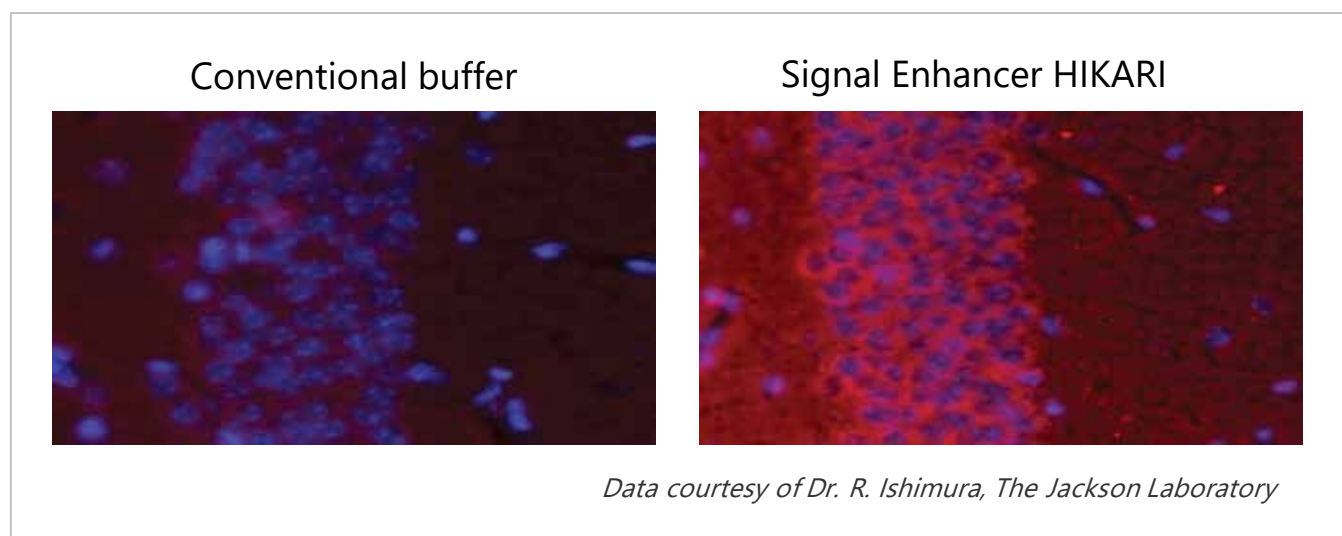


## Features

- Enhances signals - yields several fold increase in signal intensity
- Reduces background - improves the specificity of your antibodies
- Simple - just dilutes your antibodies with Signal Enhancer HIKARI solution
- Works with any system - applicable to colorimetric, chemiluminescent and fluorescent detection

## Application Data

Brain tissue section was stained with secondary antibody conjugated with AF555 (red) and counter stained with Hoechst dye (blue).



Note:

Signal Enhancer HIKARI for Immunostain Solution A and B exhibit different enhancing effects, depending on antigens and antibodies. These solutions can be used independently. However, both solutions should be explored in order to select the more suitable one for your particular assay system. A Starter Kit [NU00201] composed of both Solution A and B is available for such purpose.

## Ordering Information

Product Name	Storage	Cat. No.	PKG Size
Signal Enhancer HIKARI for Immunostain Starter Kit (Solution A and Solution B)	4°C	NU00201	5 ml each
Signal Enhancer HIKARI for Immunostain, Solution A	4°C	NU00202	20 ml
Signal Enhancer HIKARI for Immunostain, Solution B	4°C	NU00203	20 ml



# One-step Polymer Detection System

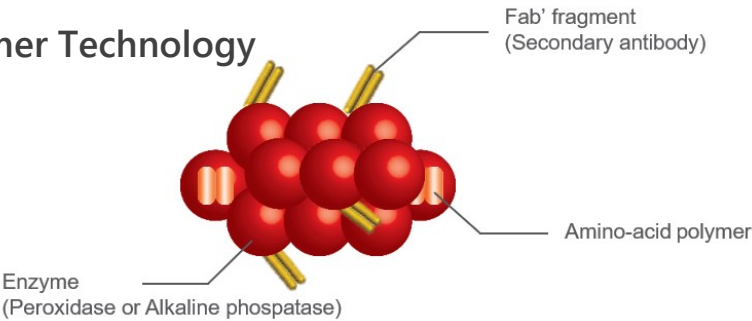
## Histofine<sup>®</sup> Simple Stain



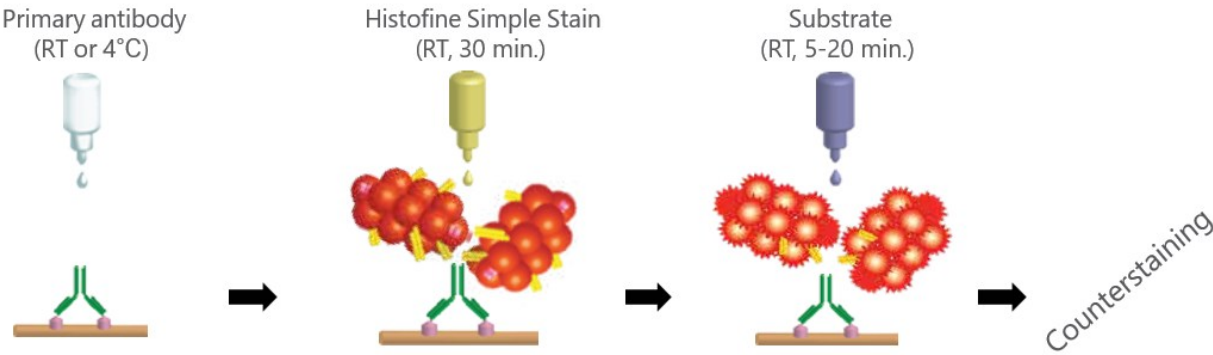
### Features

#### Increased staining intensity by Polymer Technology

Multiple molecules of enzyme and secondary antibodies conjugate to amino-acid polymers. Polymeric enzyme provides increased staining intensity.

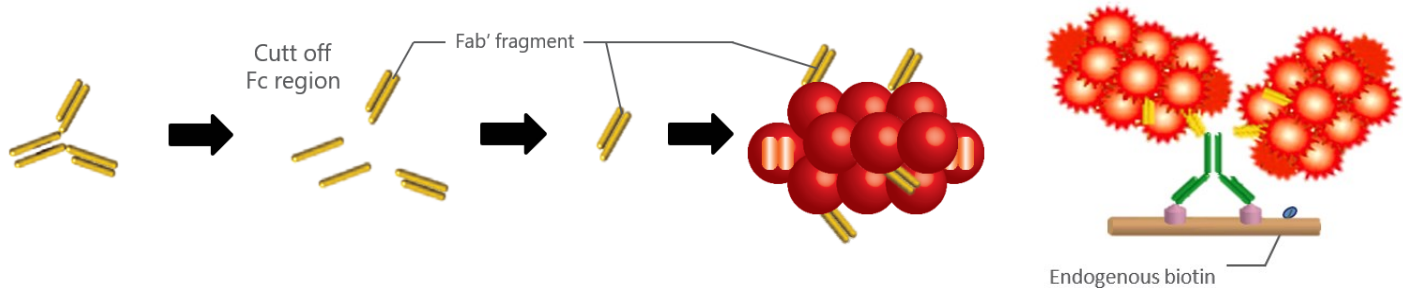


#### Simplified Staining Steps



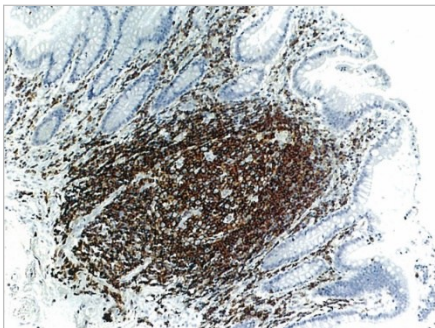
#### Low Background

Only Fab' fragments are used as secondary antibodies. As Fab' fragment doesn't bind to endogenous Fc receptor, the background remains clean. Endogenous biotin will not affect the staining result.

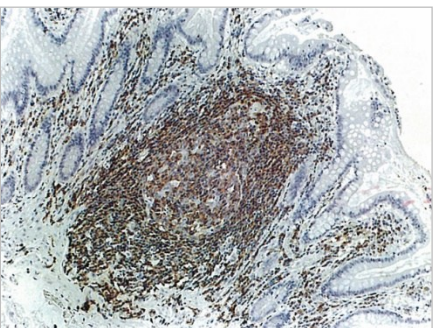


### Comparison between Histofine<sup>®</sup> and conventional SAB System

Simple Stain MAX PO (M)



Conventional SAB System PO (M)



Primary Antibody: LCA mouse-mono  
Substrate: DAB

Antigen Retrieval

Blocking

Antifade

Antibody Diluent

Detection

Anti GFP Antibody

## Ordering Information

### For **Mouse** Tissue Sections

Product Name	Cat. No.	Quantity	Size	Species of primary antibody
Histofine® Simple Stain MOUSESTAIN KIT	414321F 414322F	50 tests 500 tests	6 mL ea 51 mL ea	Mouse primary antibody
Histofine® Simple Stain Mouse MAX PO (R)	414341F	170 tests	1 x 17 ml	Rabbit primary antibody
Histofine® Simple Stain Mouse MAX PO (G)	414351F	170 tests	1 x 17 ml	Goat primary antibody
Histofine® Simple Stain Mouse MAX PO (Rat)	414311F	170 tests	1 x 17 ml	Rat primary antibody

### For **Rat** Tissue Sections

Histofine® Simple Stain Rat MAX PO (MULTI)	414191F	170 tests	1 x 17 ml	Mouse & rabbit primary ab
Histofine® Simple Stain Rat MAX PO (M)	414171F	170 tests	1 x 17 ml	Mouse primary antibody
Histofine® Simple Stain Rat MAX PO (R)	414181F	170 tests	1 x 17 ml	Rabbit primary antibody
Histofine® Simple Stain Rat MAX PO (G)	414331F	170 tests	1 x 17 ml	Goat primary antibody

### For **Human** Tissue Sections

Histofine® Simple Stain Human MAX PO (MULTI)	414151F	170 tests	1 x 17 ml	Mouse & rabbit primary ab
	414152F	500 tests	3 x 17 ml	
	414154F	1500 tests	9 x 17 ml	
Histofine® Simple Stain Human MAX PO (M)	414131F	170 tests	1 x 17 ml	Mouse primary antibody
	414132F	500 tests	3 x 17 ml	
	414134F	1500 tests	9 x 17 ml	
Histofine® Simple Stain Human MAX PO (R)	414141F	170 tests	1 x 17 ml	Rabbit primary antibody
	414142F	500 tests	3 x 17 ml	
	414144F	1500 tests	9 x 17 ml	
Histofine® Simple Stain Human MAX PO (G)	414161F	170 tests	1 x 17 ml	Goat primary antibody
	414162F	500 tests	3 x 17 ml	
Histofine® Simple Stain Human AP (MULTI)	414261F	170 tests	1 x 17 ml	Mouse & rabbit primary ab
	414262F	500 tests	3 x 17 ml	
Histofine® Simple Stain Human AP (M)	414241F	170 tests	1 x 17 ml	Mouse primary antibody
	414242F	500 tests	3 x 17 ml	
Histofine® Simple Stain Human AP (R)	414251F	170 tests	1 x 17 ml	Rabbit primary antibody
	414252F	500 tests	3 x 17 ml	

### Detection Kit

Histofine® DAB-2V Kit	425312F	500 tests	-	Peroxidase
	425314F	1500 tests	-	
Histofine® Simple Stain AEC Solution	415182F	500 tests	3 x 17 ml	Peroxidase
	415184F	1500 tests	9 x 17 ml	



# Alkaline phosphatase substrate

## BCIP-NBT Solution (Ready To Use)



A ready to use solution of chromogenic substrate of alkaline phosphatase (AP). It can be used in a wide range of applications, such as detection of alkaline phosphatase (AP) bound by antigen-antibody reaction and endogenous alkaline phosphatase (AP) of stem cells and osteoblasts, in blotting and tissue or cell staining.

### Features

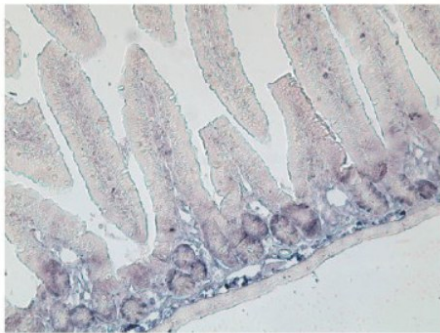
- Ready-to-use
- Can be used in wide range of applications such as immunochemical staining or endogenous AP staining.
- Can be used in in situ hybridization (ISH), as it is tested for DNase and RNase

### Application: Immunohistochemical staining

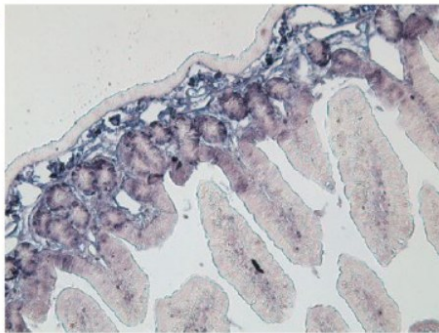
Detecting PCNA from mouse small intestine paraffin embedded section. If there is insufficient sensitivity, extending reaction time can result in good sensitivity.

(Reaction time)

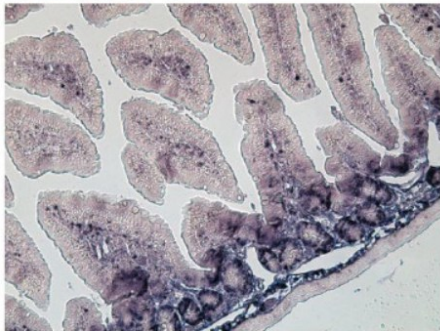
5 minutes



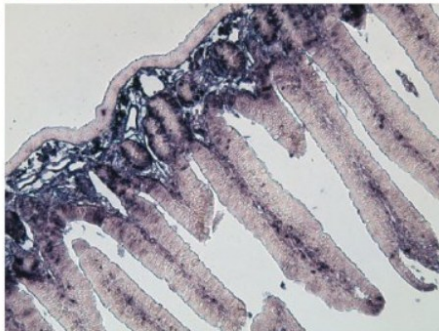
10 minutes



15 minutes



30 minutes



Tissue: Small intestine paraffin section from mouse  
Antigen activation: HistoVT One (10x, pH 7.0) (#06380) at 90°C for 20 minutes  
Blocking: Blocking One Histo (#06349-64) at room temperature for 10 minutes  
Primary antibody: PCNA Antibody (Novus #NB100-456) 1:500. Diluent: tTBS / Blocking One Histo in 19:1 ratio.  
Secondary antibody: Goat anti-Rabbit IgG (H+L) Secondary Antibody [Alkaline Phosphatase] (Pre-adsorbed) (Novus #NB7181) 1:1,000. Used tTBS as an antibody diluent.  
Staining: BCIP-NBT Solution (Ready To Use), reacted at room temperature for time shown above.  
Observation: Enclosed by CC/Mount (Diagnostic BioSystems #K002), observed by microscope MF 50x (Olympus #BX50)

### Ordering Information

Product Name	Storage	Cat. No.	PKG Size
BCIP-NBT Solution (Ready To Use)	4°C	19880-84	100 ml

Antigen Retrieval

Blocking

Antifade

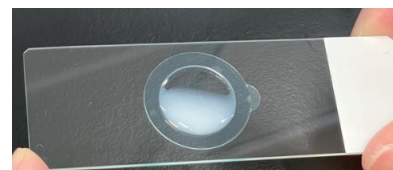
Antibody Diluent

Detection

Anti GFP Antibody

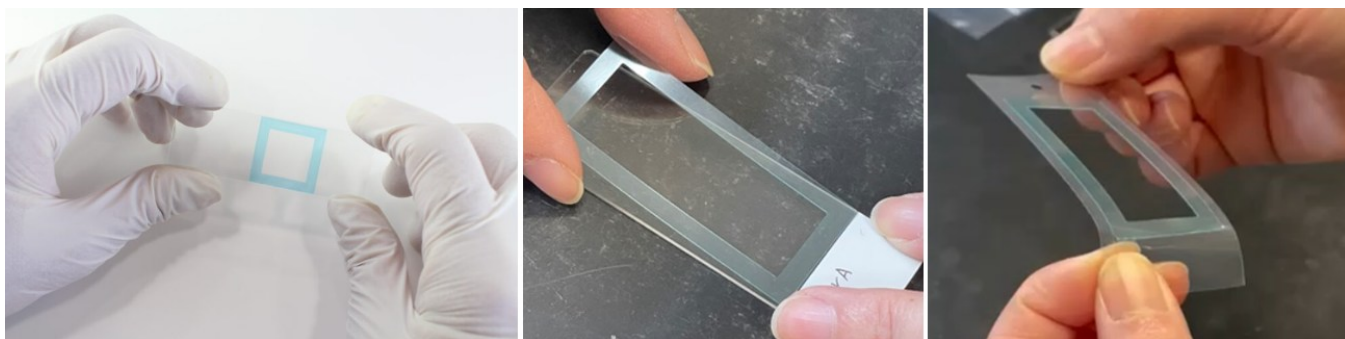
# Leak-resistant Seal for Immunostaining

## CS IHC-Fencing Seal

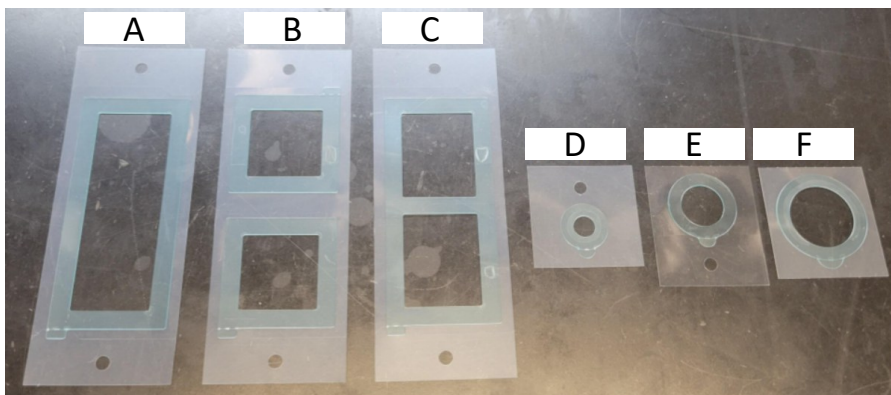


### Features

- Ready-to-use
- Quick and easy, just stick it on
- Possible to reapply
- Enables applying antibody solutions without wiping off water
- Retains adhesion at high temperature (70 degree C)



### 6 types to choose from



Applications:  
Compatible with microscope glass slide

Material:  
PET (low adhesion tape)



### Ordering Information

Product Name	Size	Cat. No.	PKG Size
CS IHC-Fencing Seal A type	Outside dim.: 55 x 25 mm, Inside dim.: 47 x 17 mm	R-CSC091-01	180 pieces
CS IHC-Fencing Seal B type	Outside dim.: 25 x 25 mm, Inside dim.: 17 x 17 mm	R-CSC092-01	270 pieces
CS IHC-Fencing Seal C type	Outside dim.: 55 x 25 mm, Inside dim.: 21.5 x 17 mm	R-CSC093-01	180 pieces
CS IHC-Fencing Seal D type	Outside diam.: $\phi 11$ , Inside diam.: $\phi 5$	R-CSC094-01	270 pieces
CS IHC-Fencing Seal E type	Outside diam.: $\phi 16$ , Inside diam.: $\phi 10$	R-CSC095-01	270 pieces
CS IHC-Fencing Seal F type	Outside diam.: $\phi 21$ , Inside diam.: $\phi 15$	R-CSC096-01	270 pieces

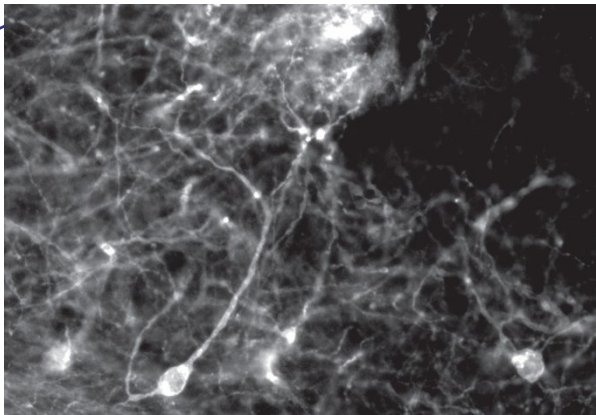
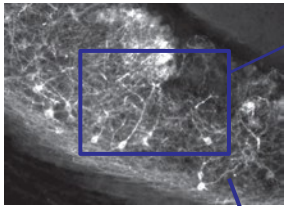
- Height: 0.155 mm
- 30 pieces of trial package and custom size are available, welcome to inquiry.



# Rat anti-GFP Antibody, Mono



## Application



Sample : Mouse brain (nerve cell)  
Primary antibody : Anti-GFP (Rat IgG2a), Mono (1:1000) RT, over night  
Secondary antibody : Anti-Rat IgG-Cy3 (1:300) RT, 1 hr  
Blocking : 5% Normal goat serum / 0.2% Triron X-100 in PBS  
Fixing method : 4% Paraformaldehyde

*Data courtesy of Dr. Y. Yoshihara, RIKEN Brain Science Institute*

## Product Specifications

Clone : GF090R  
Isotype : IgG2a (Rat)  
Product form : Liquid  
Immunogen : His-GFP(full length) fusion protein  
Application : Immunohistochemistry 1:1000 – 1:2000  
Western Blotting 1:1000 – 1:2000  
ELISA 1:2000 – 1:20000

## Reference

- Hasegawa, Emi, Yulong Li, and Takeshi Sakurai. "Regulation of REM sleep in mice: The role of dopamine and serotonin function in the basolateral amygdala." Neuroscience Research 200 (2024): 28-33.
- Matsuda, Takashi, et al. "Two parabrachial Cck neurons involved in the feedback control of thirst or salt appetite." Cell Reports 43.1 (2024).
- Nakajima, Chikako, et al. "Identification of the growth cone as a probe and driver of neuronal migration in the injured brain." Nature Communications 15.1 (2024): 1877.

## Ordering Information

Product Name	Storage	Cat. No.	PKG Size
Anti-GFP (Rat IgG2a), Monoclonal (GF090R)	4°C	04404-26	50 µg
		04404-84	200 µg

### Related Products

Product Name	Storage	Cat. No.	PKG Size
Anti-GFP (Rat IgG2a), Monoclonal (GF090R), Agarose Conjugate	4°C	06083-05	500 µg

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Innovations for Life Sciences.



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Website: [www.nacalaiusa.com](http://www.nacalaiusa.com)

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