BIOTnA

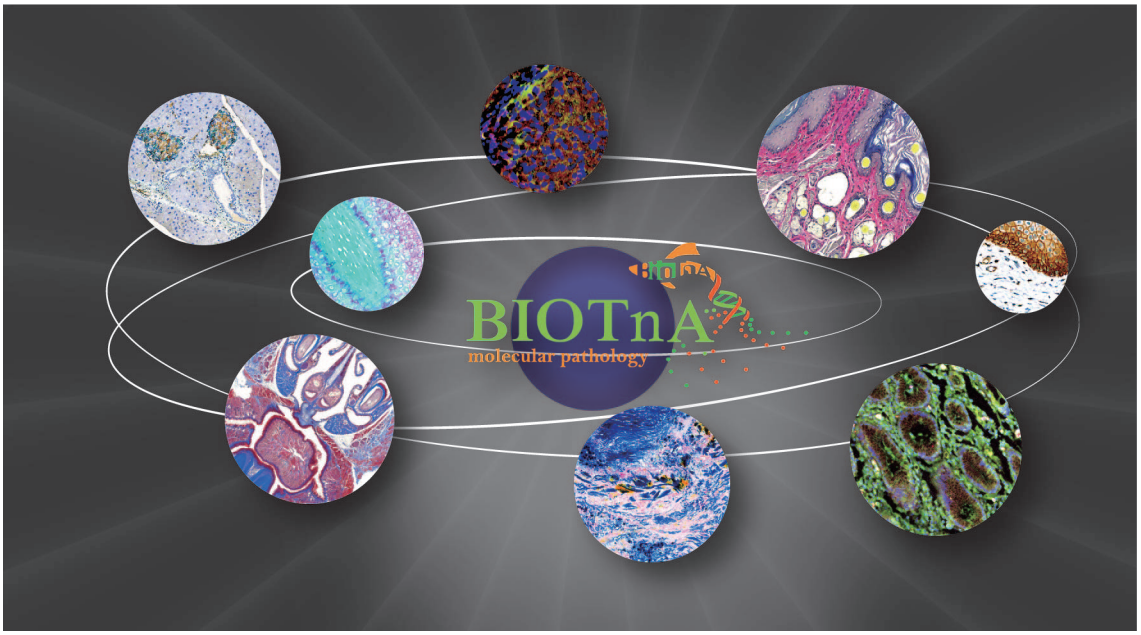
molecular pathology

CATALOGUE

Our Passion

At BIOTnA our passion is providing biomedical laboratories with the tools to improve the diagnosis, prognosis and therapies that benefit patients worldwide.

BIOTnA performs R&D, production, distribution and marketing of unique products for Immunohistochemistry (IHC), Immunocytochemistry (ICC), Fluorescent in situ hybridization (FISH), Chromogenic in situ hybridization (CISH), In Situ PCR and Polymerase Chain Reaction (PCR) technologies that meet the highest international standards for applications in Molecular Pathology, Cancer Research, Microbiology, Immunology and Genetics.



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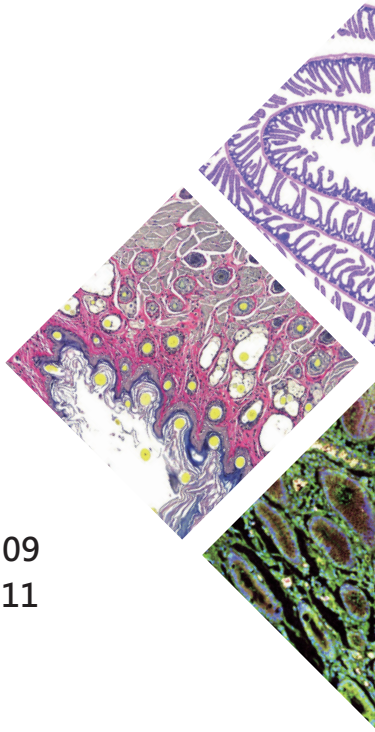

IHC

CISH、FISH

TUNEL

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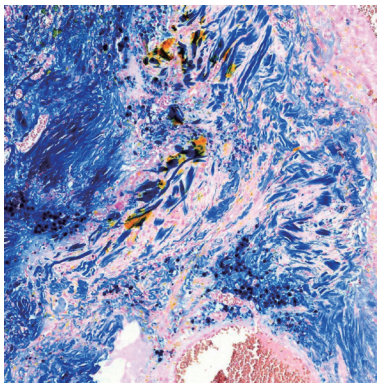
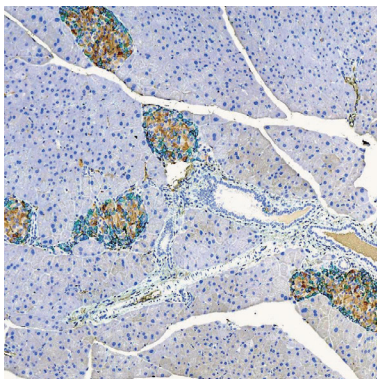
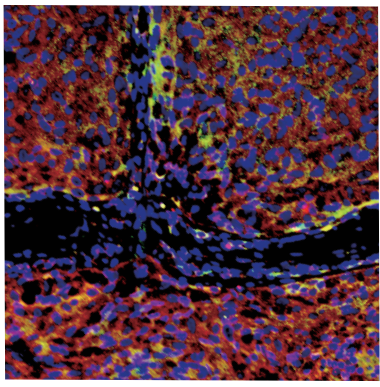
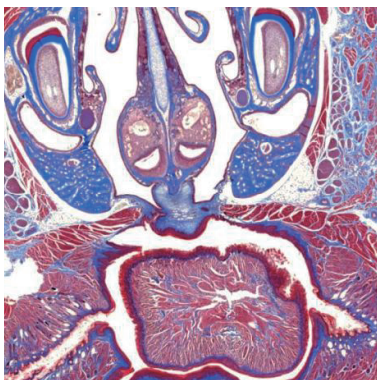








05 Molecular biotechnology

Immunohistochemistry

Immunohistochemistry or Immunocytochemistry is the name of the method for localizing specific antigens in tissue or cells using antibodies, enzyme conjugates and substrate-chromogens. The antigen-antibody reaction can be evidenced with an optical microscope. The antibodies can be polyclonal or monoclonal (usually from mouse or rabbit) in origin. These non-infectious biological reagents are used by research and clinical laboratories to detect the presence of infectious agents, cancer and other proteins of interest.

BIOTnA designs several polymer detection kits for signal and double stain. We also design a special blocker as a protein blocker that can reduce the non-specific background caused by endogenous IgG and IgM avoids the mouse on mouse problems. We offer HRP been developed using a proprietary tandem hyperlabelling technology used to directly label immunoglobulins with enzymes. This ensures consistent and reproducible immunostaining for all types of nuclear, cytoplasmic and membranal antigens, in different types of tissues or cells.

We supply our customers with a wide array of high sensitivity and easy–to-use Substrate-chromogen Systems for HRP (DAB, AEC, HRP Green). Our Ancillary products for IHC include different Retriever Solutions for HIER, Enzymes for Tissue or Cell digestion, Diluents and Blockers, Reagents Controls, Buffers, Mounting Media and Counterstains.

Mouse Probe HRP Labeling Kit

Mouse

Storage condition : Store at 2-8 °C

Expired date : 18-24 months

Description

The Mouse Probe HRP Labeling Kit is a non-biotin, 1-step detection system that allows for the demonstration of antigens in paraffin-embedded and frozen tissue, cryostat sections, blood smears, and cytosmears. The kits have been developed using a hyperlabelling technology used to directly label immunoglobulins with enzymes. This ensures consistent and reproducible immunostaining for all types of nuclear, cytoplasmic and membranes antigens, in different types of tissues.

The Mouse Probe HRP Labeling Kit is suitable for use with mouse IgG and IgM primary antibodies. The Mouse Probe HRP Labeling kits are optimized for use with most primary antibodies; however, they are universal kits and therefore work equally well with pre-diluted and concentrated antibodies from different vendors' primaries.

Mouse Probe HRP Labeling Kit with DAB brown

Cat No	Pack size	Tests
TAHC01D-15	15 mL	150T
TAHC01D-50	50 mL	500T
TAHC01D-100	100 mL	1000T

Contents :

- Hydrogen peroxidase block
- High effect immunoblock
- Mouse probe HRP conjugated
- DAB buffer
- DAB chromogen (20X)
- Hematoxylin

The Mouse Probe HRP Labeling Kit with DAB brown is displayed brown color. It could be dehydrated and maintained for long time.

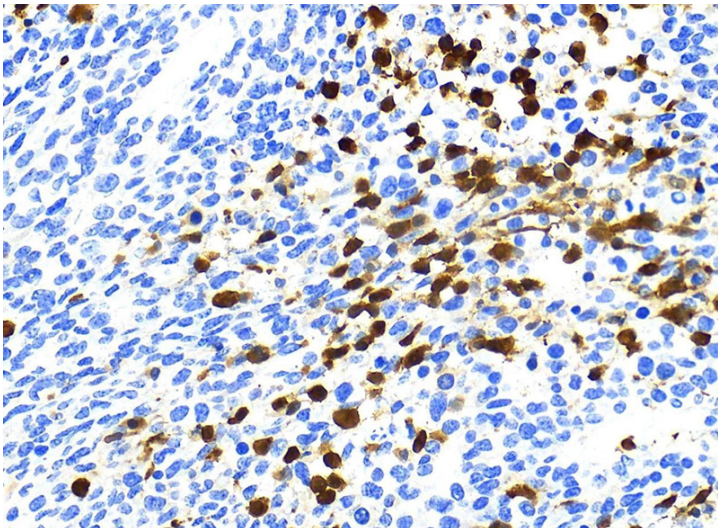
Mouse Probe HRP Labeling Kit with AEC

Cat No	Pack size	Tests
TAHC01A-15	15 mL	150T
TAHC01A-50	50 mL	500T
TAHC01A-100	100 mL	1000T

Contents :

- Hydrogen peroxidase block
- High effect immunoblock
- Mouse probe HRP conjugated
- AEC chromogen
- Hematoxylin

The Mouse Probe HRP Labeling Kit with AEC is displayed red color. It could not be dehydrated.



Rabbit Probe HRP Labeling Kit

Rabbit

Storage condition : Store at 2-8 °C

Expired date : 18-24 months

Description

The Rabbit Probe HRP Labeling Kit is a non-biotin, 1-step detection system that allows for the demonstration of antigens in paraffin-embedded and frozen tissue, cryostat sections, blood smears, and cytosmears. The kits have been developed using a hyperlabelling technology used to directly label immunoglobulins with enzymes. This ensures consistent and reproducible immunostaining for all types of nuclear, cytoplasmic and membranes antigens, in different types of tissues.

The Rabbit Probe HRP Labeling Kit is suitable for use with rabbit IgG and IgM primary antibodies. The Rabbit Probe HRP Labeling kits are optimized for use with most primary antibodies; however, they are universal kits and therefore work equally well with pre-diluted and concentrated antibodies from different vendors' primaries.

The Rabbit Probe HRP Labeling Kit with DAB brown is displayed brown color. It could be dehydrated in alcohol.

Rabbit Probe HRP Labeling Kit with DAB brown

Cat No	Pack size	Tests
TAHC02D-15	15 mL	150T
TAHC02D-50	50 mL	500T
TAHC02D-100	100 mL	1000T

Contents :

- Hydrogen peroxidase block
- High effect immunoblock
- Rabbit probe HRP conjugated
- DAB buffer
- DAB chromogen (20X)
- Hematoxylin

The Rabbit Probe HRP Labeling Kit with DAB brown is displayed brown color. It could be dehydrated in alcohol.

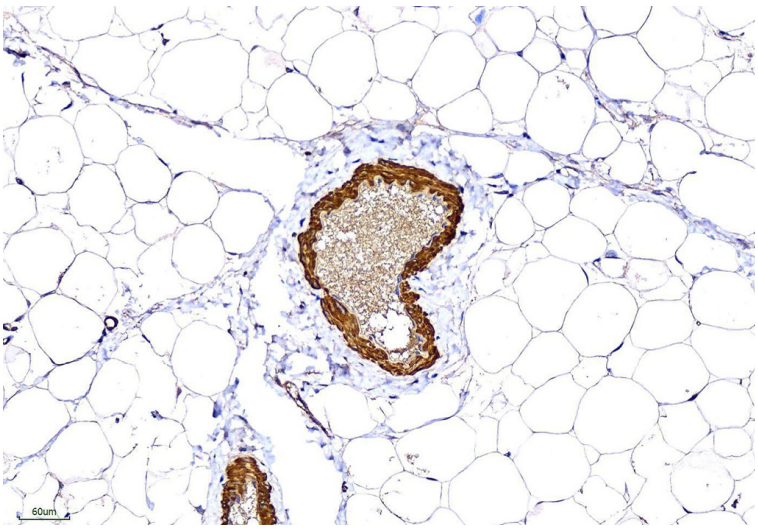
Rabbit Probe HRP Labeling Kit with AEC

Cat No	Pack size	Tests
TAHC02A-15	15 mL	150T
TAHC02A-50	50 mL	500T
TAHC02A-100	100 mL	1000T

Contents :

- Hydrogen peroxidase block
- High effect immunoblock
- Rabbit probe HRP conjugated
- AEC chromogen
- Hematoxylin

The Rabbit Probe HRP Labeling Kit with AEC is displayed red color. It could not be dehydrated in alcohol.



Mouse/Rabbit Probe HRP Labeling Kit

Storage condition : Store at 2-8 °C

Expired date : 18-24 months

Description

The Mouse/Rabbit Probe HRP Labeling Kit is a non-biotin, 1-step detection system that allows for the demonstration of antigens in paraffin-embedded and frozen tissue, cryostat sections, blood smears, and cytosmears. The kits have been developed using a hyperlabelling technology used to directly label immunoglobulins with enzymes. This ensures consistent and reproducible immunostaining for all types of nuclear, cytoplasmic and membranes antigens, in different types of tissues.

The Mouse/Rabbit Probe HRP Labeling Kit is suitable for use with mouse and rabbit IgG and IgM primary antibodies. The Mouse/Rabbit Probe HRP Labeling kits are optimized for use with most primary antibodies; however, they are universal kits and therefore work equally well with pre-diluted and concentrated antibodies from different vendors' primaries.

Mouse/Rabbit Probe HRP Labeling Kit with DAB brown

Cat No	Pack size	Tests
TAHC03D-15	15 mL	150T
TAHC03D-50	50 mL	500T
TAHC03D-100	100 mL	1000T

Contents :

- Hydrogen peroxidase block
- High effect immunoblock
- Mouse and Rabbit probe HRP conjugated
- DAB buffer
- DAB chromogen (20X)
- Hematoxylin

The Mouse/Rabbit Probe HRP Labeling Kit with DAB brown is displayed brown color. It could be dehydrated in alcohol.

Mouse/Rabbit Probe HRP Labeling Kit with AEC

Cat No	Pack size	Tests
TAHC03A-15	15 mL	150T
TAHC03A-50	50 mL	500T
TAHC03A-100	100 mL	1000T

Contents :

- Hydrogen peroxidase block
- High effect immunoblock
- Mouse and Rabbit probe HRP conjugated
- AEC chromogen
- Hematoxylin

The Mouse/Rabbit Probe HRP Labeling Kit with AEC is displayed red color. It could not be dehydrated in alcohol.

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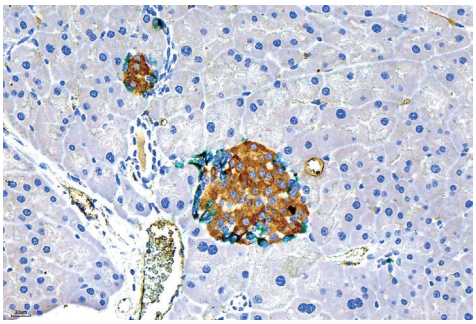
molecular pathology

Double stain Kit

Description

The double stain kits apply IHC technology and detect more than one target protein one the same section slide. BIOTnA designed several double stain kit in HRP system those are suitable for use with mouse and rabbit IgG and IgM primary antibodies.. In our system, the powerful immunoblock could reduce the background and non-specific binding from endogenous contamination and the first primary reaction once time. The Systems included DAB brown and HRP Green chromogen. They will well define clearly two biomarkers as present in the same or different area.

TADS01 Mouse × Rabbit
TADS02 Goat × Mouse/Rabbit
TADS03 Mouse/Rabbit × Mouse/Rabbit
TADS04 Rat × Mouse/Rabbit



Mouse

Rabbit

Goat

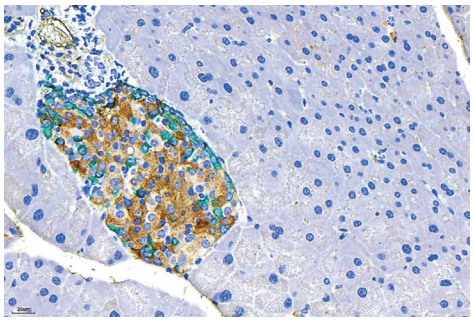
Storage condition : Store at 2-8 °C

Expired date : 18-24 months

Cat No	Pack size	Tests
TADS01	15 mL	150T
TADS02	15 mL	150T
TADS03	15 mL	150T
TADS04	15 mL	150T

Contents :

- Hydrogen peroxidase block
- High effect immunoblock
- Rat or Goat probe HRP conjugated
- DAB buffer
- DAB chromogen (20X)
- HRP Green buffer
- HRP Green chromogen



Substrate Chromogen

Product	Cat No	Pack size	Tests
HRP Green Chromogen Kit	TA01HG-15	15 mL	150T
HRP Green Chromogen Kit	TA01HG-50	50 mL	500T
HRP Green Chromogen Kit	TA01HG-100	100 mL	1000T
DAB Brown Chromogen Kit	TA01DB-15	15 mL	150T
DAB Brown Chromogen Kit	TA01DB-50	50 mL	500T
DAB Brown Chromogen Kit	TA01DB-100	100 mL	1000T
AEC Solution (ready-to-use)	TA01AE-15	15 mL	150T
AEC Solution (ready-to-use)	TA01AE-50	50 mL	500T
AEC Solution (ready-to-use)	TA01AE-100	100 mL	1000T

Storage condition : Store at 2-8 °C

Expired date : 18-24 months

Contents :

- Chromogen (concentrated)
- Buffer

INTRODUCTION

In Situ Hybridization (ISH) is a powerful technique for localizing specific nucleic acid targets within fixed tissues and cells, allowing you to obtain temporal and spatial information about gene expression and genetic loci.

BIOTnA

ISH detection kits are designed by Chromogenic In Situ Hybridization (CISH) in formalin-fixed, paraffin-embedded tissue sections, cell samples, blood or bone marrow smears, and metaphase chromosome spreads.

ADVANTAGES OF CISH OVER FISH

• Quick and easy interpretation of results comparable to IHC• Simultaneous observation of tissue morphology and CISH signals• Storage of slides at room temperature – CISH signals are permanent• No costly fluorescent microscope needed.

Pretreatment Step

1. De-wax, and rehydration
2. Deperoxidase
3. Heat treatment
4. Enzyme treatment
5. Probe Hybridization 37°C, 16 hr

Detection Step

1. Non-specific blocking
2. Anti-DIG
3. Polymer HRP conjugated
4. DAB development
5. Counterstain 20~60s。
6. Covering and reading

BioSpot ISH Kit For DIG probe

Description

The BioSpot ISH Kit For DIG probe is designed to be used for the detection of digoxigenin (DIG) labeled probes in either formalin-fixed, paraffin-embedded tissue or cell samples by chromogenic in situ hybridization (CISH).
The kits have been developed using a hyperlabelling technology used to directly label probe with HRPs. The kit included complete pretreatment, labeling, blocking, washing and detection system. It also could be used for animal and plant samples in research filed.

TASH01D with DAB chromogen
TASH01A with AEC chromogen

Storage condition : Store at 2-8 °C

Expired date : 18-24 months

Cat No	Pack size	Tests
TASH01D-50T	6mL	50T
TASH01D-100T	12 mL	100T
TASH01A-50T	6mL	50T
TASH01A-100T	12 mL	100T

Contents :

- Hydrogen peroxidase block
- High effect immunoblock
- 20X SSC buffer
- Anti-DIG labeling
- DAB or AEC chromogen
- Detection system

BioSpot ISH Kit For Biotin probe

Description

The BioSpot ISH Kit For Biotin probe is designed to be used for the detection of Biotin labeled probes in either formalin-fixed, paraffin-embedded tissue or cell samples by chromogenic in situ hybridization (CISH).
The kits have been developed using a hyperlabelling technology used to directly label probe with HRPs. The kit included complete pretreatment, labeling, blocking, washing and detection system. It also could be used for animal and plant samples in research filed.

TASH02D with Biotin chromogen
TASH02A with Biotin chromogen

Storage condition : Store at 2-8 °C

Expired date : 18-24 months

Cat No	Pack size	Tests
TASH02D-50T	6mL	50T
TASH02D-100T	12 mL	100T
TASH02A-50T	6mL	50T
TASH02A-100T	12 mL	100T

Contents :

- Hydrogen peroxidase block
- 20X SSC buffer
- DAB or AEC chromogen
- Biotin Detection system

BioSpot ISH Kit with FAM For DIG Probe

Description

The Biospot kit F488 is designed to be used for the detection of digoxigenin (DIG)-labeled probes in either formalin-fixed, paraffin-embedded tissue or cell samples by fluorescence in situ hybridization (FISH).

Interpretation of results must be made within the context of the patient' s clinical history with respect to further clinical and pathologic data of the patient by a qualified pathologist.

Cat No	Pack size
TASH01F-50	50 reactions
TASH01F-100	100 reactions

Contents :

Pretreatment kit

- Heat Pre-treatment Solution,20x
- Enzyme Solution
- SSC buffer,20x
- Hu DNA (+) control probe 5'-DIG
- Ms DNA (+) control probe 5'-DIG
- RNA (+) control probe 5'-DIG

Detection system

- Hi-Effect Block reagent
- Anti-DIG antibody
- F488 labeling
- DAPI Solution

BioTnA In Situ PCR kit with DAB Brown for DIG labeled probe

Description

The BioTnA In Situ PCR Kit with DAB is designed to be used for the detection of digoxigenin (DIG)-labeled probes hybridized specific DNA sequence through PCR application in either formalin-fixed, paraffin-embedded tissue or cell samples by chromogenic in situ hybridization (CISH).

Interpretation of results must be made within the context of the patient' s clinical history with respect to further clinical and pathologic data of the patient by a qualified pathologist.

Cat No	Pack size
TAISP01D-50	50 reactions
TAISP01D-100	100 reactions

Contents :

Pre-PCR treatment

- Heat Pre-treatment Solution,20x
- Hydrogen Peroxidase Block
- Lysis buffer
- Enzyme Solution

PCR reagent

- PCR reaction mixture
- Control primer set

Post-PCR treatment

- Fixation solution
- SSC buffer,20x
- Wash buffer,50X

Detection kit

- Hybridization buffer
- Sealing gel
- Universal probe DIG labeled
- Control probe DIG labeled
- Hi-Effect Block reagent
- Anti-DIG antibody
- Polymer HRP labeling
- DAB buffer
- DAB chromogen,20x
- Nuclear Blue Solution

Slide

- Negative control slide*2
- Control slide*4

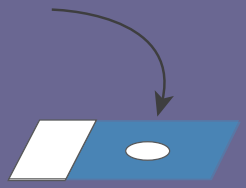
Immunohistochemistry
CISH

BIOTnA molecular pathology

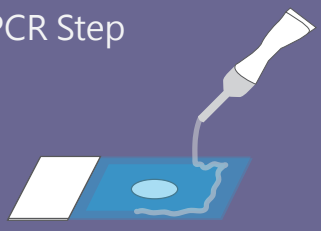
I. primer design

II. Sample preparing
1.dewax
2.rehydration

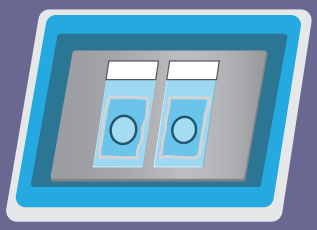
III. pretreatment
1.De-peroxidase
2.Heat per-treatment
3.Lysis per-treatment
4.Enzyme pre-treatment

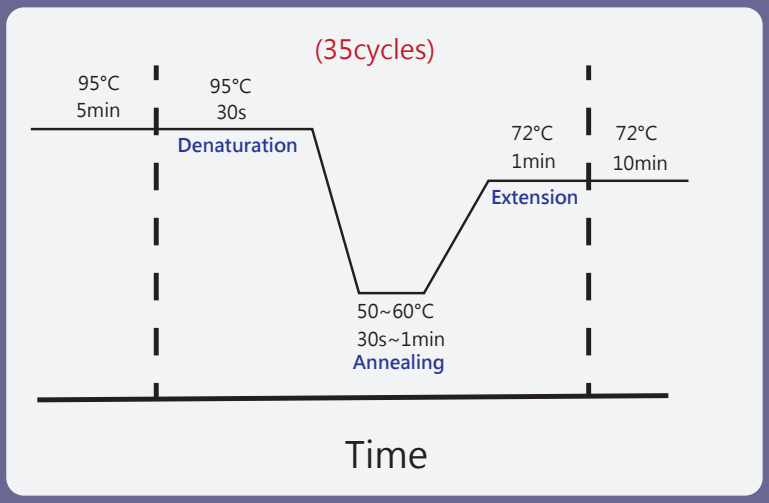


IV. PCR Step



seal the cover slip in sealing gel





V. Post-PCR Fixation

VI.In Situ Hybirdiaztion

VII.Detection
1.anti-Dig
2.HRP Labeling
3.DAB working solution

BioTnA In Situ RT-PCR Kit with DAB Brown for DIG labeled probe

Description

The BioTnA In Situ RT-PCR Kit with DAB is designed to be used for the detection of digoxigenin (DIG)-labeled probes hybridized specific RNA sequence through PCR application in either formalin-fixed, paraffin-embedded tissue or cell samples by chromogenic in situ hybridization (CISH). Interpretation of results must be made within the context of the patient' s clinical history with respect to further clinical and pathologic data of the patient by a qualified pathologist.

Cat No	Pack size
TAISP02D-50	50 reactions
TAISP02D-100	100 reactions

Contents :

Pre-PCR treatment
- Heat Pre-treatment Solution,20x
- Hydrogen Peroxidase Block
- Lysis buffer
- Enzyme Solution

PCR reagent
- PCR reaction mixture
- Control primer set

Post-PCR treatment
- Fixation solution
- SSC buffer,20x
- Wash buffer,50X

Detection kit
- Hybridization buffer
- Sealing gel
- Universal probe DIG labeled
- Control probe DIG labeled
- Hi-Effect Block reagent
- Anti-DIG antibody
- Polymer HRP labeling
- DAB buffer
- DAB chromogen,20x
- Nuclear Blue Solution

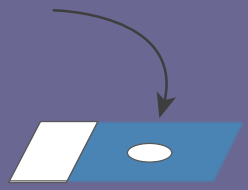
Slide
- Negative control slide*2
- Control slide*4

BIOTnA molecular pathology

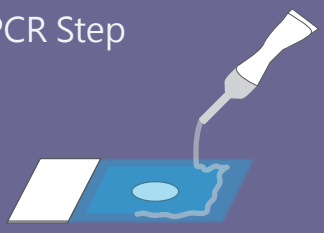
I. primer design

II. Sample preparing
1.dewax
2.rehydration

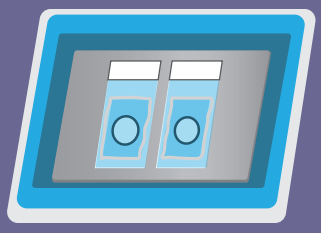
III. pretreatment
1.De-peroxidase
2.Heat per-treatment
3.Lysis per-treatment
4.Enzyme pre-treatment

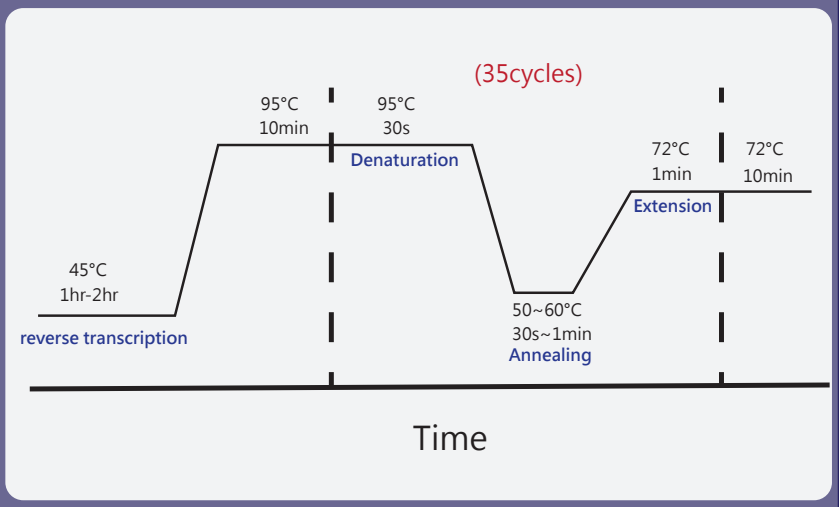


IV. PCR Step



seal the cover slip in sealing gel





V. Post-PCR Fixation

VI.In Situ Hybirdiaztion

VII.Detection
1.anti-Dig
2.HRP Labeling
3.DAB working solution

TUNEL Apoptosis Assay Kit

Description

The kit can detect fragmented DNA in the nucleus during apoptosis. In this modified TUNEL assay kit, Digoxigen-in-nucleotide is labeled at the DNA 3´-OH ends using the natural or recombinant terminal deoxynucleotidyl transferase (TdT or rTdT). Then, mouse anti- DIG and HRP labeled polymer bind to these Digoxigenin nucleotides, which are detected using the peroxidase substrate, 3,3' -diaminobenzidine (DAB), a stable chromogen. Using this procedure, apoptotic nuclei are stained dark brown.

Cat No	Pack size
TAAP01D-20	20 reactions
TAAP01D-50	50 reactions
TAAP01D -100	100 reactions

Contents :

- Proteinase K
- Permeabilization buffer
- TdT Reaction Buffer
- TdT Enzyme Reagent
- TdT Label Reagent
- Background reducing buffer
- anti- DIG
- HRP labeled polymer
- DAB Chromogen (20x)
- DAB Buffer

TUNEL Apoptosis Assay Kit(FAM)

Description

The kit can detect fragmented DNA in the nucleus during apoptosis. In this modified TUNEL assay kit, Digoxigen-in-nucleotide is labeled at the DNA 3´-OH ends using the natural or recombinant terminal deoxynucleotidyl transferase (TdT or rTdT). The mouse anti- DIG bind to these Digoxigenin nucleotides, which are detected by following the anti-Mouse IgG (H+L)-FAM. The nuclei of apoptotic cells should be observed green color under fluorescence microscope.

Cat No	Pack size
TAAP01F-20	20 reactions
TAAP01F-50	50 reactions
TAAP01F-100	100 reactions

Contents :

- Proteinase K
- Permeabilization buffer
- TdT Reaction Buffer
- TdT Enzyme Reagent
- TdT Label Reagent
- Background reducing buffer
- anti- DIG
- anti-mouse IgG (H+L)-FAM(488)
- DAPI solution
- Aqua mounting medium

BIOTnA molecular pathology

Biotna – Tools of molecular
Fluorescence multiple stain kit (Provide customized services)

Cat No	Pack size
TATS01F	1ml

Storage condition : Store at 2-8 °C

Expired date : 18-24 months

TATS02F

Contents :

- Fluorescence Blocking Reagent
- Goat anti-Rabbit IgG (H+L)-488
- Goat anti-Mouse IgG (H+L)-594
- Goat anti-Rabbit IgG-iFluor-680

TATS03F

Contents :

- Fluorescence Blocking Reagent
- Goat anti-Rabbit IgG (H+L)-488
- Goat anti-Rabbit IgG (H+L)-594
- Goat anti-Rabbit IgG-iFluor-680

Fluorescence Blocking Reagent

Cat No	Pack size
TA00B2-15	15ml
TA00B2-50	50ml
TA00B2-100	100ml

Goat anti-Mouse IgG (H+L)-594

Cat No	Pack size
TAFB01-T	500ul

Goat anti-Rabbit IgG (H+L)-594

Cat No	Pack size
TAAB01	500ul

Donkey anti-Goat IgG (H+L)488

Cat No	Pack size
TAFB03-T	500ul

Goat anti-Mouse IgG (H+L)-488

Cat No	Pack size
TAFB01-F	500ul

Goat anti-Rabbit IgG (H+L)-488

Cat No	Pack size
TAFB02-F	500ul

Donkey anti-Goat IgG (H+L)-488

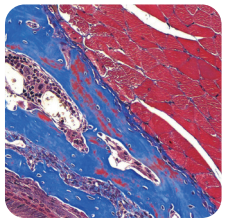
Cat No	Pack size
TAFB03-F	500ul

Goat anti-Rabbit IgG-iFluor-680

Cat No	Pack size
TAFB02-C	500ul

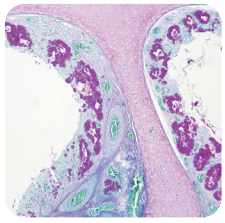
Histochemistry staining Kit

Masson Trichrome



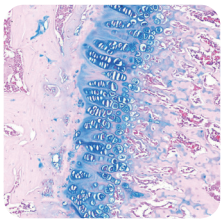
Cat No	Major target	volumn
TASS01-125	Collagen fiber (blue), muscle (red)	125ml
TASS01-250		250ml

Periodic Acid-Schiff(PAS)



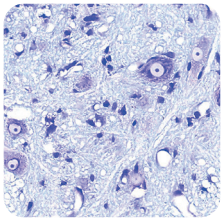
Cat No	Major target	volumn
TASS02-125H	Carbohydrates, such as glycogen, glycoprotein, mucus, and basement membrane	125ml
TASS02-250H		250ml
TASS02-500H		500ml
TASS02-250G		250ml
TASS02-500G		500ml

Alcian blue(pH2.5)、Alcian blue(pH1.0)



Cat No	Major target	volumn
TASS03-125pH2.5	acidic polysaccharides, such as cartilage, mucin and others	125ml
TASS03-250pH2.5		250ml
TASS03-125pH1.0		125ml
TASS03-250pH1.0		250ml

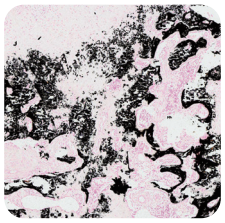
Nissl stain



Cat No	Major target	volumn
TASS04-125	Nissl body	125ml
TASS04-250		250ml

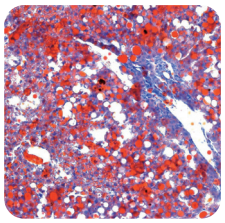
Histochemistry staining Kit

Von Kossa



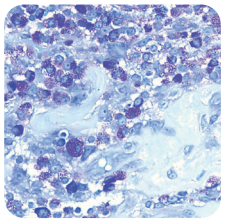
Cat No	Major target	volumn
TASS05-500	Calcium	500ml

Oil red O (frozen section only,concentrate)



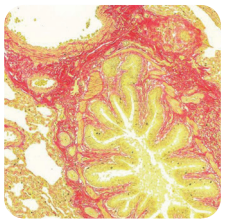
Cat No	Major target	volumn
TASS06	Lipid droplet	500ml

Toluidine blue



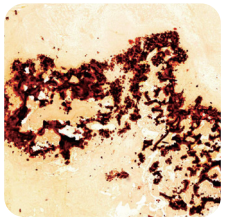
Cat No	Major target	volumn
TASS07	metachromatic dye, commonly used to defined mast cell	125ml

PicroSirius red



Cat No	Major target	volumn
TASS08-125 TASS08-500	Collagen fiber	125ml 500ml

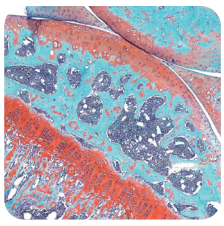
Alizarin Red S



Cat No	Major target	volumn
TASS09	Calcium	125ml

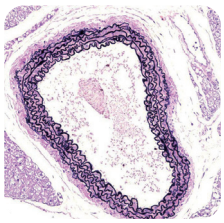
Histochemistry staining Kit

Safranin O



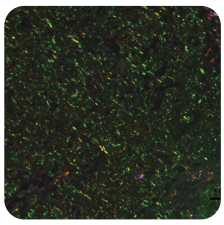
Cat No	Major target	volumn
TASS10	Cartilage, mucin, mast cell	125ml

Verhoeff-Van Gieson stain(VVG)



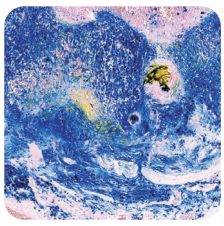
Cat No	Major target	volumn
TASS11	Elastin fiber	125ml

Congo red-dark



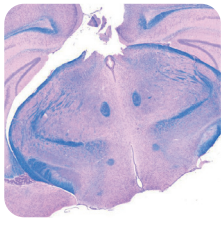
Cat No	Major target	volumn
TASS12	Amyloid substances	125ml

Prussian blue



Cat No	Major target	volumn
TASS15	Ferric ion (3+)	125ml

Luxol-Fast blue



Cat No	Major target	volumn
TASS17-125 TASS17-500	Myeline	250ml 500ml

Ancillaries for Immunohistochemistry

Product	Cat No	Pack size
Hematoxylin for HE	TA01MH-1L	1L
Nuclear blue for IHC (modified hematoxylin)	TA01NB-50 TA01NB-100 TA01NB-200 TA01NB-500 TA01NB-1L	50ml 100ml 200ml 500ml 1L
Eosin	TA01ES-200 TA01ES-1L	200ml 1L
Hematoxylin and Eosin	TA01HE-1L	1L
Hydrogen Peroxidase Block	TA00B1-50 TA00B1-100 TA00B1-200 TA00B1-500 TA00B1-1000	50ml 100ml 200ml 500ml 1000ml
Background Reducing buffer (Immunblock)	TA00B3-15 TA00B3-50 TA00B3-100	15ml 50ml 100ml
Background Reducing buffer plus	TA00B4-15 TA00B4-50 TA00B4-100	15ml 50ml 100ml
Davidson' s Fixative solution	TADF01-200 TADF01-500 TADF01-1000	200ml 500ml 1000ml

Product	Cat No	Pack size
20X Citrate Buffer, pH 6.0	TA00H01-100 TA00H01-200 TA00H01-500 TA00H01-1000	100ml 200ml 500ml 1000ml
20X Tris EDTA Buffer, pH9.0	TA00H02-100 TA00H02-200 TA00H02-500 TA00H02-1000	100ml 200ml 500ml 1000ml
Enzyme Digester I (Pepsin)	TA00E01-15 TA00E01-50 TA00E01-100	15ml 50ml 100ml
Enzyme Digester II (proteinase K)	TA00E02-15 TA00E02-50 TA00E02-100	15ml 50ml 100ml
Enzyme Digester III (Trypsin)	TA00E03-15 TA00E03-50 TA00E03-100	15ml 50ml 100ml
Permont Mount	TA00M1	500ml
Aqua Mount	TA00M2-15 TA00M2-50 TA00M2-100	15ml 50ml 100ml
1X PBS, (powder)	TABS01-20	20package

BIOTnA
molecular pathology

Ancillaries for Immunohistochemistry

Product	Cat No	Pack size
10X TBST	TABS02-200 TABS02-500 TABS02-1000	200ml 500ml 1000ml
20X SSC Buffer	TABS03-200 TABS03-500 TABS03-1000	200ml 500ml 1000ml
Antibody Diluent	TABS04-50 TABS04-100 TABS04-200 TABS04-500 TABS04-1000	50ml 100ml 200ml 500ml 1000ml
Nuclear Fast Red	TA1NR-50 TA1NR-100	50ml 100ml
Fast green	TA01FG-100 TA01FG-200	100ml 200ml
Methyl Green	TA01MG-100 TA01MG-200	100ml 200ml
Goat probe	TA00C1-15 TA00C1-50	15ml 50ml
Rat probe	TA00C2-15 TA00C2-50	15ml 50ml

Product	Cat No	Pack size
Goat anti-Mouse IgG (H+L)-HRP	TAAB01	1ml
Goat anti-Rabbit IgG (H+L)-HRP	TAAB02	1ml
Donkey anti-Goat IgG (H+L)-HRP	TAAB03	1ml
Goat anti-Mouse IgG (H+L)-HRP	TAFB02-T	1ml
Normal Mouse IgG	TANCG01	50ml
Normal Rabbit IgG	TANCG02	50ml
Normal Goat IgG	TANCG04	50ml
Hydrogen PeroxidaseBlock	TA00B1-50 TA00B1-100 TA00B1-200 TA00B1-500 TA00B1-1000	50ml 100ml 200ml 500ml 1000ml
Fluorescence Blocking Reagent	TA00B2-15 TA00B2-50 TA00B2-100	15ml 50ml 100ml
Background Reducing buffer	TA00B3-15 TA00B3-50 TA00B3-100	15ml 50ml 100ml
Background Reducing buffer plus	TA00B4-15 TA00B4-50 TA00B4-100	15ml 50ml 100ml

TnATaq DNA polymerase

Description

TnATaq DNA polymerase is a thermostable enzyme isolated from E. coli which encodes Taq DNA polymerase gene. This enzyme contains 5′ -3′ polymerase and 5′ -3′ exonuclease activity.

Storage buffer

50mM Tris-HCl pH7.9, 50mM KCl, 0.1mM EDTA, 1mM DTT, 0.5mM PMSF , 50% glycerol.

10X reaction buffer

Containing 15mM $MgCl_2$

Unit description

One unit is defined as the amount of enzyme that will incorporate 10nmole of dNTP into acid-insoluble material in 30 minutes at 74°C. The reaction conditions are: 50mM Tris-HCl pH8.8, 50mM NaCl, 5mM MgCl2, 200uM each of dATP, dCTP, dGTP, dTTP, 10 mg activated calf thymus DNA and 0.1mg/ml BSA in a final volume of 50 ml.

Storage buffer

50% glycerol (v/v), 20 mM Tris-HCl pH 8.7 at -20°C, 100 mM KCl, 0.1 mM EDTA.

Source

E coli clone

Quality control

The enzyme is free of nicking and priming activities, exonucleases and non-specific endonucleases. SDS/PAGE - 95 kD band. Activity and stability tested via thermo-cycling. The error rate per nucleotide per cycle is ~ 2.5 x 10-5; the accuracy is ~ 4 x 10-4. Estimated half life at 95°C is 0.5 hours.

Cat No	Pack size	Conc.
TAMB01Z-500	500U	5U/uL
TAMB01Z-1000	1000U	5U/uL
TAMB01Z-2500	2500U	5U/uL

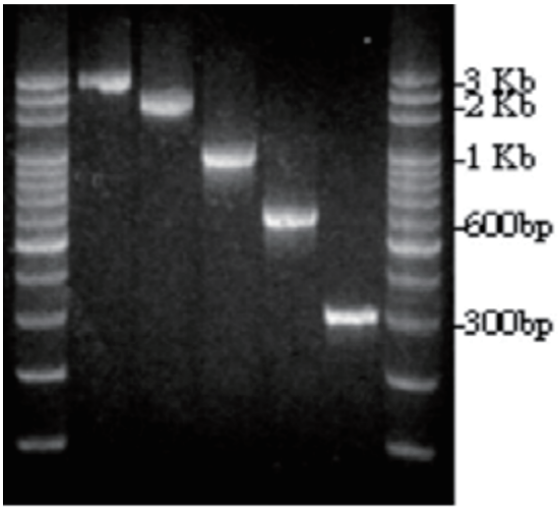
PCR cycles program

Step	Temperature	Time	Cycle
Initial denaturation	94-95°C	1-3 mins	1
Denaturation	94-95°C	10-60sec	25-35
Annealing	50-68°C	10-30sec	
Extension	72°C	1min/1kb	
Final extension	72°C	1-10 mins	1

IMPORTANT:
Annealing temperature should be 2-6°C lower than the primer melting temperature.

Shipping and Storage conditions

Shipping and temporary storage at -20 and for up to 1 month at room temperature has no detrimental effects on the quality of TnATaq DNA polymerase.



BIOTnA molecular pathology

Hot start Taq DNA polymerase

Description

Hot start Taq DNA Polymerase is designed for Real-Time PCR and Hot- start PCR. It is modified with a special inhibition of PCR at room temperature. This will prevent primer dimers and other artifacts.

Storage buffer

50mM Tris-HCl pH7.9, 50mM KCl, 0.1mM EDTA, 1mM DTT, 0.5mM PMSF , 50% glycerol.

10X reaction buffer

Buffer containing 25mM $MgCl_2$

Unit description

One unit is defined as the amount of enzyme that will incorporate 10nmole of dNTP into acid-insoluble material in 30 minutes at 74°C. The reaction conditions are: 50mM Tris-HCl pH8.8, 50mM NaCl, 5mM MgCl2, 200uM each of dATP, dCTP, dGTP, dTTP, 10 mg activated calf thymus DNA and 0.1mg/ml BSA in a final volume of 50 ml.

Source

E coli clone

Applications

- Hot Start and real time PCR
- Multiplex PCR
- Amplification of complex genomic and cDNA

Cat No	Pack size	Conc.
TAMB02Z-500	500U	5U/uL
TAMB02Z-1000	1000U	5U/uL
TAMB02Z-2500	2500U	5U/uL

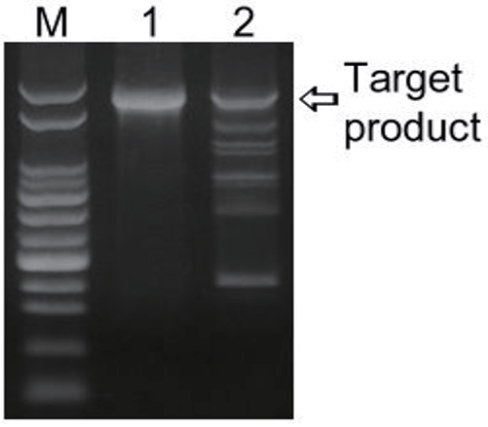
PCR cycles program

Step	Temperature	Time	Cycle
Initial denaturation	94-95°C	10 mins	1
Denaturation	94-95°C	10-60sec	25-35
Annealing	50-68°C	10-30sec	
Extension	72°C	1min/1kb	
Final extension	72°C	1-10 mins	1

IMPORTANT:
Annealing temperature should be 2-6°C lower than the primer melting temperature.

Shipping and Storage conditions

Shipping and temporary storage at -20 and for up to 1 month at room temperature has no detrimental effects on the quality of Hot start DNA polymerase.



M:100bp ladder
1. Hot start Taq
2. TnATaq

Hi Fidelity polymerase

Description

Hi Fidelity polymerase is a mixture of thermostable enzymes. It is specifically developed to synthesize length of PCR product up to 25 kb and with low error rate. Hi Fi polymerase synthesizes higher yields of product from genomic DNA, cDNA, and bacterial cultures. It has 2.5 hours half life at 96oC and easily amplify PCR product of G-C rich or secondary structure DNA by adding G- C rich buffer.

Storage condition

-20°C

10X reaction buffer

Buffer containing 25mM $MgCl_2$

Unit description

One unit is defined as the amount of enzyme that will incorporate 10nmole of dNTP into acid-insoluble material in 30 minutes at 74°C. The reaction conditions are: 50mM Tris-HCl pH8.8, 50mM NaCl, 5mM MgCl2, 200uM each of dATP, dCTP, dGTP, dTTP, 10 mg activated calf thymus DNA and 0.1mg/ml BSA in a final volume of 50 ml.

Template

Hi Fidelity Polymerase is suitable for amplifying targets up to 25 kb from the following templates:
Genomic DNA: 10–200 ng
Plasmid DNA : 1–5 ng
cDNA : ~100 ng starting total RNA
Amplification of longer targets (up to 15 kb) may be possible, but may require more template and longer elongation times.

Cat No	Pack size	Conc.
TAMB03Z-500	500U	5U/uL
TAMB03Z-2500	2500U	5U/uL

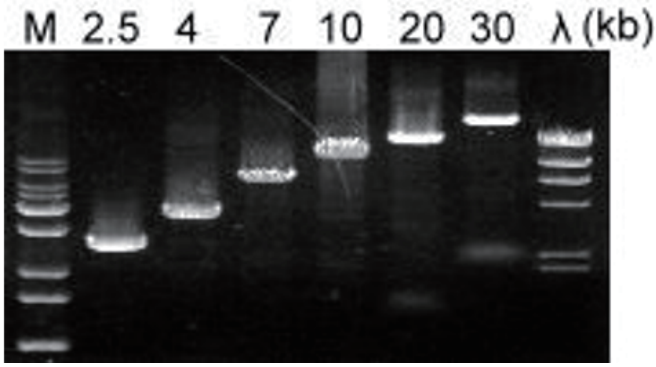
PCR cycles program

Step	Temperature	Time	Cycle
Initial denaturation	94-95°C	1-3 mins	1
Denaturation	94-95°C	10-60sec	25-35
Annealing	50-68°C	10-30sec	
Extension	72°C	1min/1kb	
Final extension	72°C	1-10 mins	1

IMPORTANT:
Annealing temperature should be 2-6°C lower than the primer melting temperature.

Shipping and Storage conditions

Shipping and temporary storage at -20 and for up to 1 month at room temperature has no detrimental effects on the quality of TnATaq DNA polymerase.



Hi Fidelity polymerase amplified λ DNA from 2.5k to 30k DNA fragement.

Pfu DNA polymerase

Description

Pfu DNA polymerase is a thermostable enzyme isolated from Pyrococcus furiousus. The enzyme replicates DNA at 75°C, catalyzing the polymerization of nucleotides into duplex DNA in the 5'→3' direction. Pfu DNA polymerase possesses 3'→5' exonuclease (proofreading) activity. Base misincorporation is rapidly excised by the proofreading activity of the polymerase. Pfu DNA polymerase is recommended for PCR and primer extension reactions that require high- fidelity. The fragments of Pfu DNA polymerase generated are blunt-ended.

Error rate

2 x10-6

Unit description

One unit of Pfu DNA Polymerase incorporates 10 nmolof dNTP into acid-insoluble material in 30 min at 74°C.

Storage buffer

50% glycerol (v/v), 20 mM Tris-HCl pH 8.7 at -20°C, 100 mM KCl, 0.1 mM EDTA.

Source

E coli clone

Quality control

The enzyme is free of nicking and priming activities, exonucleases and non-specific endonucleases. SDS/PAGE - 95 kD band. Activity and stability tested via thermo-cycling.

Cat No	Pack size	Conc.
TAMB04Z-500	500U	5U/uL
TAMB04Z-2500	2500U	5U/uL

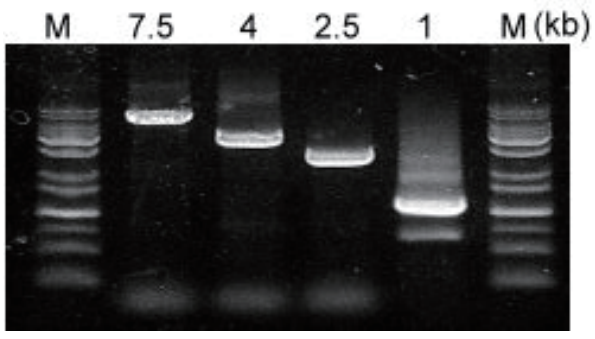
PCR cycles program

Step	Temperature	Time	Cycle
Initial denaturation	94-95°C	1-3 mins	1
Denaturation	94-95°C	0.2-1	25-35
Annealing	50-68°C	0.2-1	
Extension	68-75°C	2min/1kb	
Final extension	68-75°C	5	1

IMPORTANT:
Annealing temperature should be 2-6°C lower than the primer melting temperature.

Shipping and Storage conditions

Shipping and temporary storage at -20 and for up to 1 month at room temperature has no detrimental effects on the quality of Pfu DNA polymerase.



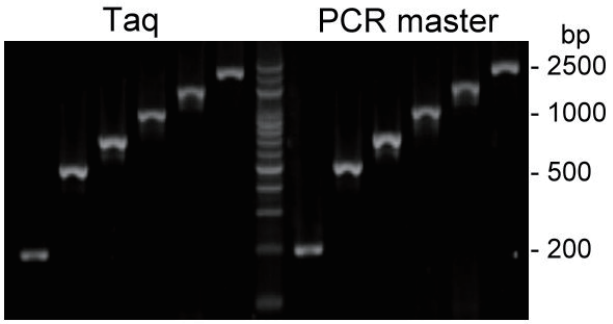
Pfu DNA polymerase amplified 1kb to 7.5kb DNA Fragement.

2x PCR mix

Description

2x PCR mix is optimized mixture. It contains Taq polymerase, reaction buffer, dNTP and enhancer as 2-fold concentration. 2x PCR mix is designed to allow the user to quickly and easily prepare the mixture of reaction. The PCR mix may amplify products up to 3 kb and the products can be cloned into T-vector directly.

Cat No	Pack size	Conc.
TAMB05Z-500	3x1.7 mL	2x
TAMB05Z-2500	5x3x1.7 mL	2x



Comparison of PCR products

2x Redy mix

Description

2X Redy Mix is optimized mixture. It contains Taq polymerase, reaction buffer, dNTP, enhancer and red dye as 2-fold concentration. 2x Redy mix is designed to allow the user to quickly and easily prepare the mixture of reaction and ready loading.

Storage condition

long time at -20°C

Functional Assay

It is tested for performance in the polymerase chain reaction (PCR) to amplify a 500 bp region of the actin cDNA gene. The resulting PCR product is visualized on an ethidium bromide-stained agarose gel.

Contaminant Assay

No contaminating endonuclease or exonuclease activity detected.

Application

Amplification of DNA fragments up to 5 kb
Labelling of PCR products with modified nucleotides (biotin-dUTP, fluorescein-dUTP)
Cycle sequencing
Generation of PCR product for TA cloning

Cat No	Pack size	Conc.
TAMB06Z-500	3x1.7 mL	2x
TAMB06Z-2500	5x3x1.7 mL	2x

PCR cycles program

Step	Temperature	Time	Cycle
Initial denaturation	94-95°C	1-3 mins	1
Denaturation	94-95°C	10-60sec	25-35
Annealing	50-68°C	10-30sec	
Extension	72°C	1min/1kb	
Final extension	72°C	1-10 mins	1

Shipping and Storage conditions

Shipping and temporary storage at -20 and for up to 1 month at room temperature has no detrimental effects on the quality of Taq DNA polymerase.

2X Hi Fi mix

Description

Hi Fi polymerase synthesizes higher yields of PCR product from genomic DNA, cDNA, bacterial cultures. It has 2.5 hours half life at 96oC and is easy to amplify PCR product of G-C rich or secondary structure DNA.

2X Hi Fi Mix is optimized mixture. It contains Hi Fi polymerase, reaction buffer, dNTP and enhancer as 2-fold concentration. 2x Hi Fi mix is designed to allow the user to quickly and easily prepare the mixture of reaction. The 2x Hi Fi mix can amplify PCR products up to 10-15 kb and the products can be cloned into T-vector directly.

2X Hi Fi Mix

containing 3.6mM $MgCl_2$

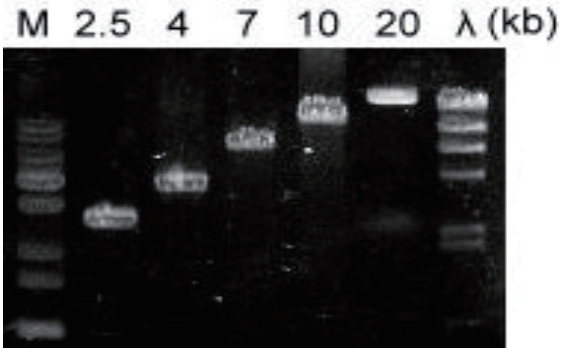
Application

Target of DNA fragments is up to 20 kb □Proof reading function
Amplification of genomic DNA

Cat No	Pack size	Conc.
TAMB07Z-500	3x1.7 mL	2x
TAMB07Z-2500	5x3x1.7 mL	2x

Storage conditions

long time at -20°C
short time at 4 °C



2X Hot start mix

Description

Hot start Taq DNA Polymerase is designed for Real-Time PCR and Hot-start PCR. It is modified with a special inhibition of PCR at room temperature. This will prevent primer dimers and other artifacts.

2X Hot Start mix is optimized mixture. It contains Hot Start Taq polymerase, reaction buffer, dNTP and enhancer as 2-fold concentration. 2x Hot Start mix is designed to allow the user to quickly and easily prepare the mixture of reaction. The 2x Hot Start mix can amplify PCR products up to 5 kb and the products can be
cloned into T-vector directly.

Cat No	Pack size	Conc.
TAMB08Z-500		2x
TAMB08Z-2500	5x3x1.7 mL	2x

Storage conditions

long time at -20°C
short time at 4 °C

2X Hi Fi Mix

containing 3.6mM $MgCl_2$

Application

Target of DNA fragments is up to 3-5 kb
Hot Start reaction
Real Time PCR

2X Pfu mix

Description

Pfu DNA polymerase is a thermostable enzyme isolated from Pyrococcus furiousus. The enzyme replicates DNA at 75°C, catalyzing the polymerization of nucleotides into duplex DNA in the 5'-3' direction. Pfu DNA polymerase possesses 3'-5' exonuclease (proofreading) activity. Base misincorporation is rapidly excised by the proofreading activity of the polymerase. Pfu DNA polymerase is recommended for PCR and primer extension reactions that require high-fidelity. The fragments of Pfu DNA polymerase generated are blunt-ended.

Cat No	Pack size	Conc.
TAMB09Z-500	3x1.7 mL	2x
TAMB09Z-2500	5x3x1.7 mL	2x

Storage conditions

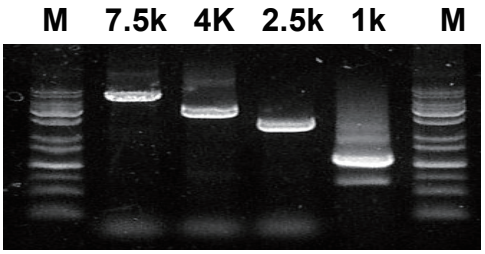
long time at -20°C

2X Pfu Mix

containing 3.6mM $MgCl_2$

Application

Amplification of DNA fragments is up to 7.5 kb Proof reading function.



5X GC rich buffer

Description

Improve the amplification of GC-rich targets from genomic DNA or cDNA template. The GC rich buffer can reducing the denature temperature of template.

Cat No	Pack size
TAMB34Z	1 mL

Storage conditions

long time at -20°C

Application

GC-rich targets
Repetitive sequences
Templates with varying GC content
Improves fidelity of PCR amplification

Denaturation

The first denaturation step must be more than 5minutes.

2x qPCR Master mix

Description

2x qPCR Master mix is designed for quantitative real-time analysis of DNA samples.

- Strong signals and high sensitivity due to fluorescent dye.
- High specificity - no primer dimers, no NTC signal.
- Optimized 2x qPCR Master mixes for different real-time PCR instruments. Master mix formulations are optimized for different machines.

2x qPCR Master mix is ideally suited for:

- Gene expression analysis
- Microarray validation
- Viral load determination qRT-PCR

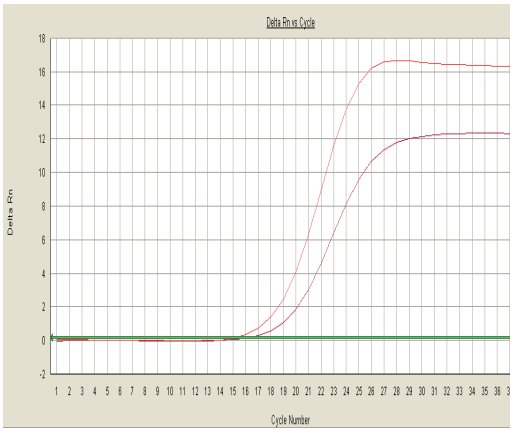
Components

2x qPCR Master mix is a 2x mixture of dNTPs, Hotstart Taq polymerase, MgCl2, fluorescent detection dye, reference dye (optional), and buffer components.

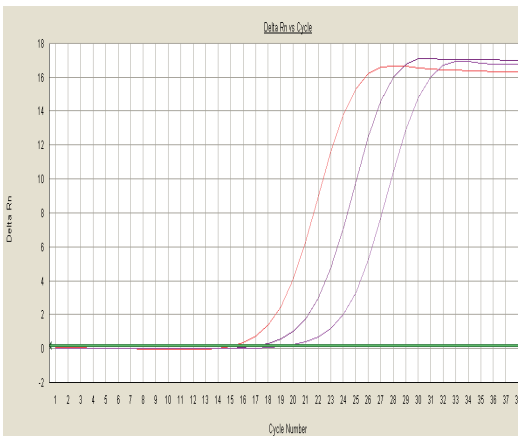
Storage condition

long time at -20°C

Cat No	TAMB11Z-500	TAMB11Z-2500
Pack size	3x 1.68 mL 5x3x1.68 mL	3x 1.68 mL 5x3x1.68 mL
Description	2X qPCR master mix with ROX	2x qPCR master mix
qPCR Instruments	ABI,7000,7300,7700, 7900, stepOne Plus StepOne™ Eppendorf Realplex 4 ABI7500 Stratagene Mx3000, Mx3005, Mx4000	BioRad CFX96 Roche LightCycler 480 MJ Research Opticon and Opticon 2 MJ Research Chromo 4 Corbett Rotor-gene 600 ,3000 Eppendorf Realplex 2Product Application



Comparison: BioTnA and another



The real time PCR results of different concentration of β-actin cDNA

Probe 2X qPCR Master mix

Description

Probe 2x qPCR Master mix is designed for quantitative real-time analysis of DNA samples.

- Strong signals and high sensitivity due to fluorescent dye.
- High specificity - no primer dimers, no NTC signal.
- Optimized 2x qPCR Master mixes for different real-time PCR instruments. Master mix formulations are optimized for different machines.

Probe 2x qPCR Master mix is ideally suited for:

- Gene expression analysis
- Microarray validation
- Viral load determination qRT-PCR

Components

Probe 2x qPCR Master mix is a 2X mixture of dNTPs, Hot start Taq polymerase, MgCl2, fluorescent detection dye, reference dye (optional), and buffer components.

Storage condition

long time at -20°C

Cat No	TAMB13Z-500	TAMB13Z-2500
Pack size	3x 1.68 mL 5x3x1.68 mL	3x 1.68 mL 5x3x1.68 mL
Description	Probe 2X qPCR master mix with ROX	Probe 2x qPCR master mix
qPCR Instruments	ABI,7000,7300,7700, 7900, stepOne Plus StepOne™ Eppendorf Realplex 4 ABI7500 Stratagene Mx3000, Mx3005, Mx4000	BioRad CFX96 Roche LightCycler 480 MJ Research Opticon and Opticon 2 MJ Research Chromo 4 Corbett Rotor-gene 600 ,3000 Eppendorf Realplex 2 Product Application

M-MLV reverse transcriptase H-

Cat No	Pack size	Conc.
TAMB14Z-100	10000 U	200U/uL
TAMB14Z-500	50000 U	200U/uL

Description

MMLV Reverse Transcriptase, from Murine Leukemia virus, is an RNA-dependent DNA polymerase. It synthesizes the cDNA first strand from a single-stranded RNA template to which a primer has been hybridized. MMLV RT also can extend primers hybridized to single-stranded DNA. Second strand cDNA synthesis can be achieved from some RNA templates without an additional DNA polymerase. M-MLV RT (H-) can synthesize 9.5kb products, the largest RNA component in the reaction. However, M-MLV RT synthesized more Full-length cDNA regardless of size.

Storage condition

long time at -20°C

Unit description

One unit of activity is the amount of enzyme required to incorporate 1 nmole of dNTP into an acid-insoluble form in 10 minutes at 37°C using polyA-oligo (dT) as template and primer.

Supplied 5xRT buffer

TrisHCl pH 8.3, KCl, MgCl 2, DTT

Storage buffer

50mM Tris-HCl pH8.3, 100mM NaCl, 1mM EDTA, 0.1mM DTT, 0.1% Triton X-100, 50% glycerol

Activity Assay

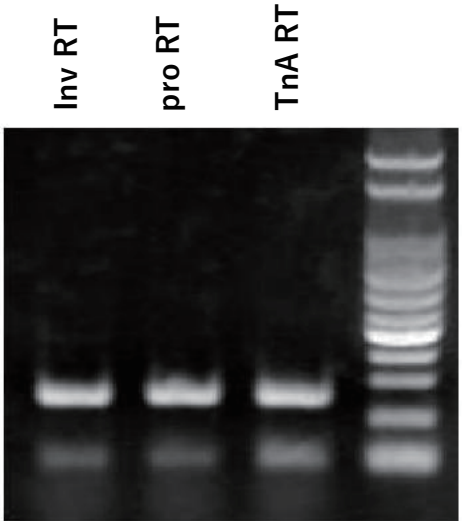
200 units of enzyme are used to produce cDNA from 1µg of a 1.2kb control RNA. The minimum specification is 120ng of first strand cDNA made from 1µg of RNA. The cDNA product must be >90% full length.

Contaminant Activity

To test for endonuclease activity, 1µg of Type I supercoiled plasmid DNA is incubated with 500 units of M-MLV Reverse Transcriptase in 1X Reaction Buffer for one hour at 37° C. Following incubation, the supercoiled DNA is visualized on an ethidium bromide-stained agarose gel to verify the absence of visible nicking or cutting (analysis on 0.4µg of DNA).

Physical Purity

The purity is >90% as judged by SDS-polyacrylamide gels with Coomassie® blue staining.



Two step RT-PCR

2X One-tube RT-PCR mix

Description

The 2x One-tube RT-PCR Hot Start kit is designed for combining two reactions of reverse transcription and PCR. It provides more simple and effective operation in RT-PCR. The reverse transcription step is working by M-MLV RT (H-). The PCR reaction is working by Hot start Taq DNA Polymerase. An especially reaction buffer is provided both for Reverse Transcriptase and Hot Start Taq DNA Polymerase.

Storage condition

long time at -20°C

Mix component

1. M-MLV RTase
2. Hot start Taq
3. RT-PCR reaction buffer
4. dNTP
5. stabilizer

Sensitivity

Targets can generally be detected from < 1 pg to 50 ng polyA RNA(mRNA) or 10 pg to 1 µg total RNA. Even lower amounts of RNA may be successfully amplified by using highly expressed transcripts.

Cat No	Pack size
TAMB17Z-50 TAMB17Z-100 TAMB17Z-500	50 rx 100 rx 500 rx

PCR cycles program

Step	Temperature	Time	Cycle
RT reaction	37-50°C	30-120mins	1
Initial denaturation	94°C	10mins	1
Denaturation	94°C	0.2-1sec	30-45
Annealing	50-68°C	0.2-1sec	
Extension	72°C	1min/1kb	
Final extension	72°C	1-10 mins	1

Analyzing the RT-PCR Products

Analyze the RT-PCR products by 1.0% (w/v) agarose gel electrophoresis. The products will be visible by UV transillumination of the ethidium bromide-stained agarose gel. Store the reaction products at –20°C until needed.

2X RT Master Mix

Description

2X RT master mix is designed for convenient and efficient cDNA synthesis. The 2X pre-mixed reagent containing M-MLV RTase, Random 6mers, oligo dT ,dNTP mixture and reaction buffer. The reverse transcription reaction just add RNA and water. The protocol is easy and the reaction can be completed in short time.

Storage condition

long time at -20°C

2X RT Master Mix

Containing M-MLV reverse transcriptase, reaction buffer, dNTP, oligo dT primers, random hexamers and stabilizer.

Application

cDNA synthesis
PCR screening
Real-time PCR

Cat No	Pack size	Conc.
TAMB18Z-500	500 uL	2X
TAMB18Z-2500	2500 uL	2X

Activity Assay

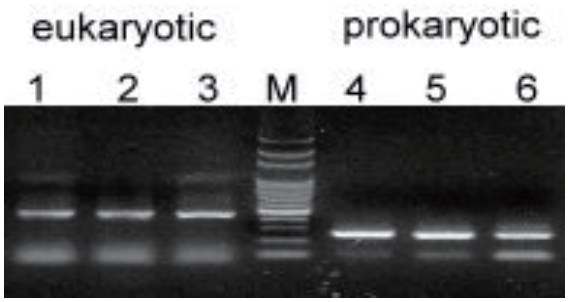
200 units of enzyme are used to produce cDNA from 1μg of a 1.2kb control RNA. The minimum specification is 120ng of first strand cDNA made from 1μg of RNA. The cDNA product must be >90% full length.

Contaminant Activity

To test for endonuclease activity, 1μg of Type I supercoiled plasmid DNA is incubated with 500 units of M-MLV Reverse Transcriptase in 1X Reaction Buffer for one hour at 37°C.

Physical Purity

The purity is >90% as judged by SDS-polyacrylamide gels with Coomassie® blue staining.



Lane 1-3 is soybean gene β-actine, Lane 4-6 is E.coli. gene
1: M-MLV RTase + oligo dT
2: 2X master mix
3: M-MLV RTase + specific gene primer
M:100 bp DNA ladder
4: M-MLV RTase + random 6mer
5: 2X master mix
6: M-MLV RTase + specific gene primer

RNAsave solution

Description

RNAsave solution is a special sample storage liquid, as long as the sample immediately after the fresh sample was immersed in this liquid reagent, RNAsave solution can quickly penetrate into the tissue or other biological sample, the stability and protection of RNA integrity without being degraded, to ensure that the downstream analysis of the dataexpression of the real reaction.

Cat No	Pack size
TAMB19Z-500 TAMB19Z-2500	100 mL 500 mL

Storage condition

37°C stable for one day
18-25°C for 7days
4 °C for one month
-20°C for long times

RNase Eraser

Description

RNase Eraser was formulated using ingredients known to be active against RNase. It effectively removes high levels of RNase contamination. Additionally, Rnase Eraser has been formulated so that it can be used to remove RNase contamination from reaction vessels. The solution is ready to use. If there is a precipitate (as may happen at low temperatures), shake and/or heat at 37°C to bring the precipitate back into solution. The product should be stored at room temperature. Always wear gloves while using RNase EraseTM as prolonged contact with skin may cause irritation. RNase EraseTM is not compatible with corrodible metal surfaces.

Cat No	Pack size
TAMB20Z-500	500 mL

Storage condition

Room temperature

Instructions

Cleaning work surface
Cleaning lab apparatus
Cleaning plastic and glass vessels
Cleaning pipettes

Warning

If contact with eyes occurs, immediately flush with water and call a physician. If ingested, do not induce vomiting, give plenty of water and contact a physician.

5X RNA Protector

Description

RNA Protector is a mixture of non-toxic reagents for storage and decontamination of RNase for RNA purification. After simple heating step, the contaminated RNase in RNA solution will be eliminated. The treated RNA can be used in all kinds of applications, including northern blot, cDNA synthesis and RT-PCR.

Cat No	Pack size
TAMB20Z-500	500 mL

Storage condition

long time at -20°C

Usage

Add RNA Protector to final concentration 1X to RNA solution and heat to 60oC for 10-20 minutes.

100 bp DNA Ladder

Description

100bp DNA Ladder is suitable for size of linear double stranded DNA fragments from 100 bp to 3 kb. The 13 bands of the ladder contain fragments following Sizes : 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1500, 2000 bp and 3000 bp. The intensity of 500 bp is about three times than the other bands to serve as reference points.

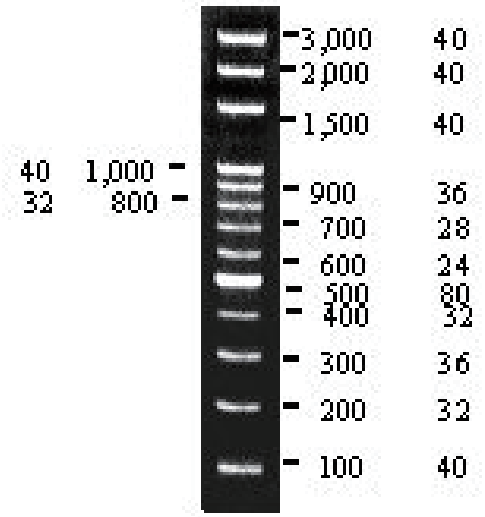
Storage buffer

10mM Tris-HCl (pH 8.0), 1mM EDTA

Storage condition

Long time at -20°C
At least 6 months at 4°C

Cat No	Pack size	Conc.
TAMB23Z-50	50 ug	0.1 ug/uL
TAMB23Z-250	5x50 ug	0.1 ug/uL



100 Kb DNA Ladder

Description

1kb DNA Ladder is suitable for size of linear double stranded DNA fragments from 0.5 kb to 10 kb. The 10 bands of the ladder contain fragments following sizes: 0.25, 0.5, 0.75, 1, 1.5, 2, 3, 4, 5, 6, 8 kb and 10 kb. The intensity of 1 and 4 kb is about three times than the other bands to serve as reference points.

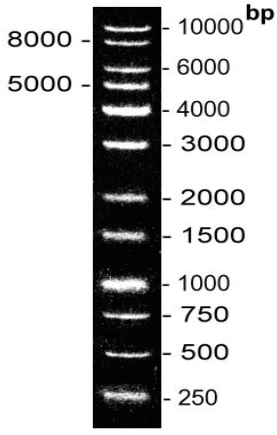
Storage buffer

10mM Tris-HCl (pH 8.0), 1mM EDTA

Storage condition

Long time at -20°C
At least 6 months at 4°C

Cat No	Pack size	Conc.
TAMB24Z-50	100 ug	0.25 ug/uL
TAMB24Z-250	5x100 ug	0.25 ug/uL



0.8% agarose gel analysis

T4 DNA ligase

Description

T4 DNA Ligase catalyzes the formation of a phospho-diester bond between 5'-phosphate and 3 '-hydroxyl ends in double strand DNA or RNA with blunt or cohesive-end termini

Storage condition

long time at -20°C

10X Ligation Buffer

Contain with Tris-HCl, MgCl2, DTT, ATP

Storage buffer

20 mM Tris-HCl (pH 7.5), 1mM DTT, 50mM KCl, 0.1mM EDTA and 50% glycerol

Inactivation

By heating at 65°C for 10min

Unit definition

0.01 Weiss unit is defined as the amount of enzyme required to catalyze the ligation of greater than 95% of the Hind III fragments of 1mg of Lambda DNA at 16°C in 20 minutes

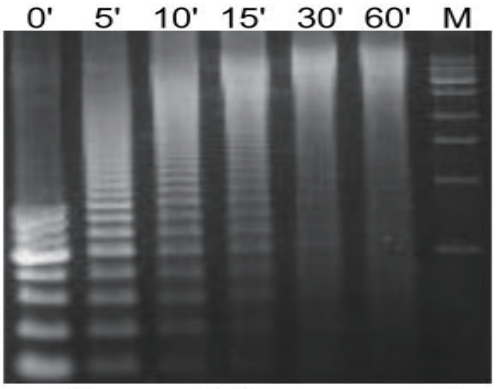
Applications

Joining double-stranded DNA with cohesive or blunt termini and 3' T-A overhangs.

Cat No	Pack size	Conc.
TAMB25Z-50	500 U	5 U/uL
TAMB25Z-250	2500 U	5 U/uL

Additional information

If the reaction is blunt end or T-A ligation must have more units of T4 DNA ligase. T4 DNA ligase is strongly inhibited by NaCl or KCl if the concentration exceeds 200mM.



Ligation of 1 μg marker using 5U ligase at 25°C

dNTP mix

Description

The deoxynucleotides (PCR grade) are suitable for many applications where high quality reagents are required. Such procedures include RT, PCR, RT-PCR, DNA labeling reaction and sequencing/ cycle Sequencing analysis.

Functional assays

Amplification of 8 kb PCR fragment from genomic DNA with Taq DNA polymerase – passed
Amplification of 0.6 kb PCR fragment from genomic DNA with Pfu DNA polymerase – passed

Cat No	Pack size	Conc.
TAMB28Z-S50	4x250 mL	25mM
TAMB28Z-S100	4x250 mL	50mM
TAMB28Z-S250	4x1 mL	100mM

Storage condition

long time at -20°C

Purity assay

HPLC analysis >99%
NMR analysis (inorganic phosphates) – passed
Exo-endo deoxyribonucleases test – passed
UV analysis – passed
Spectrophotometry – passed

dNTP set

Description

The deoxynucleotides (PCR grade) are suitable for many application where high quality reagents are required. Such procedures include RT, PCR, RT-PCR, DNA labeling reaction and sequencing/ cycle Sequencing analysis.

Functional assays

Amplification of 8 kb PCR fragment from genomic DNA with Taq DNA polymerase – passed
Amplification of 0.6 kb PCR fragment from genomic DNA with Pfu DNA polymerase – passed

Cat No	Pack size	Conc.
TAMB28Z-25	4x250 mL	25mM
TAMB28Z-100	4x500 mL	50mM
TAMB28Z-250	4x1000 mL	100mM

Storage condition

long time at -20°C

Purity assay

HPLC analysis >99%
NMR analysis (inorganic phosphates) – passed
Exo-endo deoxyribonucleases test – passed
UV analysis – passed
Spectrophotometry – passed

RNA reagent

Description

RNA REAGENT is a ready-to-use reagent for the isolation of total RNA from cells and tissues. Just a single-step is used during cell homogenization or lysate. 1ml of reagent will treat small quantities of tissue (50-100 mg) or cells (5X 106) well.

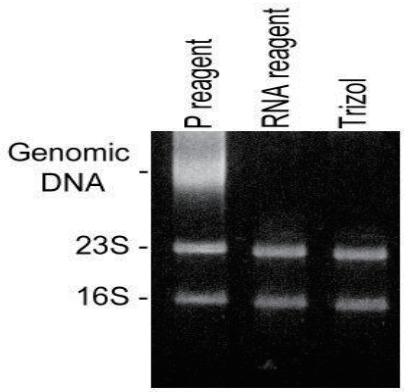
Cat No	Pack size
TAMB29Z-100	100 mL
TAMB29Z-200	200 mL

Storage condition

2 to 8°C stable for 12 months

Application

RT-PCR
Northern hybridization
RNase protection d. poly-A+ RNA selection
Differential display and microarray assay



Total RNA analysis

A variety of RNA species has an A260/A280 ratio 1.8 to 2.1 when diluted into TE.

Genomic DNA reagent

Description

Genomic DNA reagent is a DNA isolation reagent which contains guanidine and detergent mixture. It is a ready to use reagent for the isolation of genomic DNA from various biological sources. During the isolation, a biological sample is lysed (or homogenized) in Genomic DNA reagent and the genomic DNA is precipitated from the lysate with ethanol. Following ethanol wash, DNA is solubilized in water or 8mM NaOH. The procedure can be completed in 10-30 minutes with a 70-100% recovery of genomic DNA.

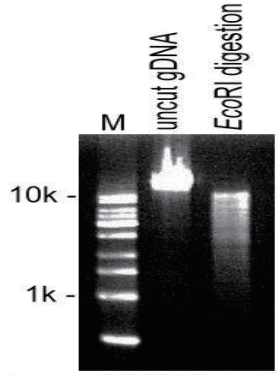
Cat No	Pack size	Conc.
TAMB30Z-S100	100 mL	0.25 ug/uL
TAMB30Z-S250	5x100 mL	0.25 ug/uL

Storage condition

Genomic DNA reagent is stable at room temperature for at least two years after the date of purchase.

Purity assay

Southern analysis
Dot blot hybridization
Molecular cloning
RFLP PCR

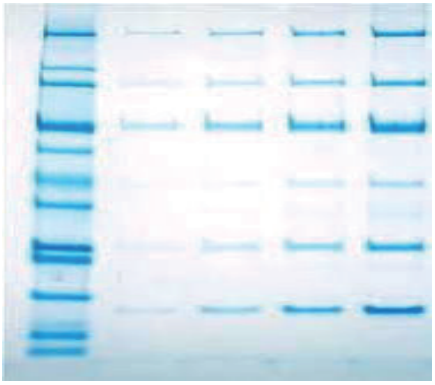


1.5 μg DNA analysis

Blue Stain

Description

Blue Stain is a alternative to traditional Coomassie Blue staining procedures. This ready-to-use stain does
not contain methanol, acetic acid or others hazardous solvent. The protein bands are visible directly on gel during the staining process in 10-15 min., then, the gel washing with water yields clear background. The sensitive of detection is up to 10-25ng under standard procedure.



Cat No	Pack size
TAMB31Z	1000 mL

Storage condition

Room temperature

Application

Fast: 10-15 can see the protein bands
Safety: no methanol and acetic acid

Bradford reagent

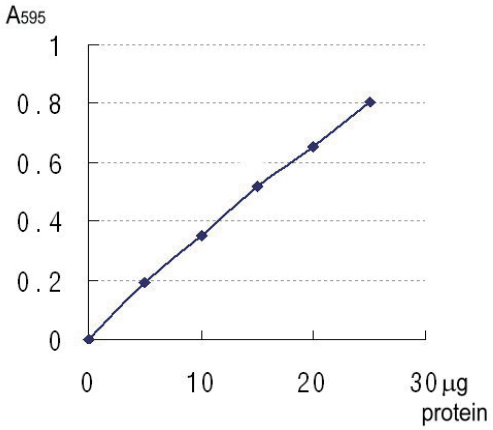
Description

The Bradford Reagent is a quick and ready-to-use coomassie-binding colorimetric assay to quantify the total amount of protein. When coomassie dye binds protein in an acidic medium, an immediate shift in absorption maximum occurs from 465 nm to 595 nm with a color change from brown to blue.
Note: The concentration of protein should be estimated by reference to absorbance measurements obtained for a series of standard protein dilutions, which are assayed alongside the unknown samples.

Cat No	Pack size
TAMB32Z	500 mL

Storage condition

The product is stored at 2-8 °C and in an unopened



cDNA Synthesis Ki

Description

M-MLV cDNA Synthesis kit provides a sensitive and easy-to-use solution for two-step RT-PCR. This kit includes five tubes comprehensive of the reagents required for successful RT-PCR. The M-MLV H-reverse transcriptase is optimized for reliable cDNA synthesis over a wide dynamic range of input RNA. The enzyme is exceptionally well with a wide variety of targets.

Storage condition

long time at -20°C.

Kit contents

1. M-MLV RTase H-
2. 5x RT buffer (contain dNTP mix)
3. 5x RNA protector
4. oligodT (15mer)
5. Random primer (6mer)

Application

1. First-strand cDNA synthesis for subsequent PCR or real-time PCR.
2. RT-PCR validation of gene expression data obtained from microarray experiments. 3.RT-PCR validation and quantification of gene silencing by RNA interference.

Cat No	Pack size
TAMB35Z-100 TAMB35Z-500	100 reaction 500 reaction

Activity Assay

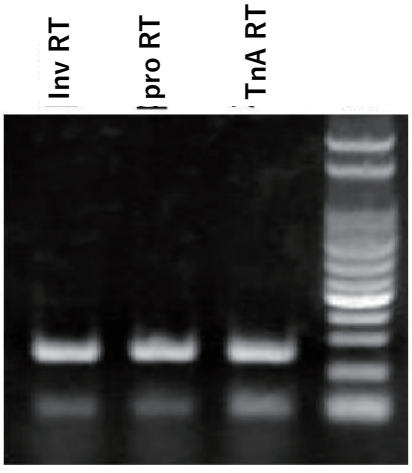
200 units of enzyme are used to produce cDNA from 1µg of a 1.2kb control RNA. The minimum specification is 120ng of first strand cDNA made from 1µg of RNA. The cDNA product must be >90% full length.

Contaminant Activity

To test for endonuclease activity, 1µg of Type I supercoiled plasmid DNA is incubated with 500 units of M-MLV Reverse Transcriptase in 1X Reaction Buffer for one hour at 37° C. Following incubation, the supercoiled DNA is visualized on an ethidium bromide-stained agarose gel to verify the absence of visible nicking or cutting (analysis on 0.4µg of DNA).

Physical Purity

The purity is >90% as judged by SDS-polyacrylamide gels with Coomassie® blue staining.



Two step RT-PCR

2x qRT-PCR Master mix

Description

2x qRT-PCR mix is designed for quantitative real-time analysis of DNA samples.

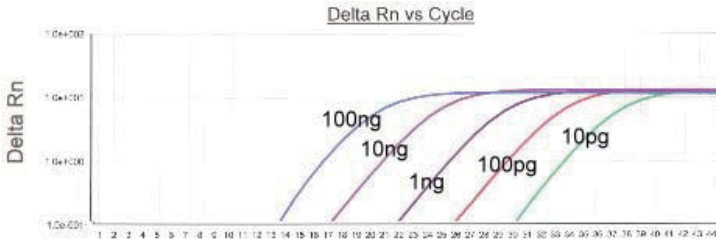
- Strong signals and high sensitivity due to fluorescent dye.
- High specificity - no primer dimers, no NTC signal.
- Optimized 2x qRT-PCR Master mixes for different real-time PCR instruments. Master mix formulations are optimized for different machines.

Components

2x qRT-PCR Master mix is a 2X mixture of dNTPs, Hot start Taq polymerase, M-MLV RTase, MgCl2, fluorescent detection dye, reference dye (optional), and buffer components.

Storage condition

long time at -20°C



Quantitative human β-actin gene from 100 ng to 10 pg total RNA

Cat No	Pack size	Description	qPCR Instruments
TAMB36Z-P5 TAMB36Z-P25	3x 1.68 mL 5x3x1.68 mL	2X qRT-PCR master mix with ROX	ABI,7000,7300,7700,7900, stepOne Plus StepOne™ Eppendorf Realplex 4 ABI7500 Stratagene Mx3000, Mx3005, Mx4000
TAMB36Z-5 TAMB36Z-25	3x 1.68 mL 5x3x1.68 mL	2x qRT-PCR master mix	BioRad CFX96 Roche LightCycler 480 MJ Research Opticon and Opticon 2 MJ Research Chromo 4 Corbett Rotor-gene 600,3000 Eppendorf Realplex 2Product Application

Probe 2x qRT-PCR Master mix

Description

Probe 2x qRT-PCR mix is designed for quantitative real-time analysis of DNA samples.

- Strong signals and high sensitivity due to fluorescent dye.
- High specificity - no primer dimers, no NTC signal.
- Optimized 2x qPCR Master mixes for different real-time PCR instruments. Master mix formulations are optimized for different machines.

Components

Probe 2x qRT-PCR Master mix is a 2X mixture of dNTPs, Hot start Taq polymerase, M-MLV RTase, MgCl2, reference dye (optional), and buffer components.

Storage condition

long time at -20°C

Cat No	Pack size	Description	qPCR Instruments
TAMB37Z-P5 TAMB37Z-P25	3x 1.68 mL 5x3x1.68 mL	Probe 2X qRT-PCR master mix with ROX	ABI,7000,7300,7700,7900, stepOne Plus StepOne™ Eppendorf Realplex 4 ABI7500 Stratagene Mx3000, Mx3005, Mx4000
TAMB37Z-5 TAMB37Z-25	3x 1.68 mL 5x3x1.68 mL	Probe 2x qRT-PCR master mix	BioRad CFX96 Roche LightCycler 480 MJ Research Opticon and Opticon 2 MJ Research Chromo 4 Corbett Rotor-gene 600,3000 Eppendorf Realplex 2Product Application

HyFectTM DNA Transfection Reagent

Cat No	Pack size
TAMB33L	500 uL

Description

HyFectTM DNA Transfection Reagent is a low cell toxicity and non-liposome reagent optimized for DNA delivery. It provides effectively, reproducibly, and affordable benefits for scientific research.

Storage condition

Store at -20 °C for long term

Protocol

1. **Cell preparation:** Cells should be seeded before 16 to 20 hours prior to transfection with around 70% confluency The medium should be refreshed 30 min before transfec tion Usually, culture media with serum does not affect transfection.
2. **DNA preparation:** DNA plasmid for transfec tion should be with high purity (A260/A280 = 1.8-1.9) to ensure efficient transfection mixture preparation.
3. **Mixture preparation:** Guideline of DNA plasmid and HyFectTM DNA Transfection Reagent amount and ratio refer to table 1. In brief, plasmid and transfection reagent are diluted in serum-free culture medium for 5 min then mixed together and tip gently for another 25 min.
4. **Transfection:** Add mixtures into cell culture dish / plate The mixture could be removed after 6 to 48 hours and refilled with culture medium.

Table 1. Recommended formula of transfection mixture

Culture Dish/Plate	Media Volume	Plasmid/ Serum-free medium	HyFectTM DNA Transfection Reagent/ Serum-free medium
96-well	100 µL	250 ng/ 10 µL	0.75 µL/ 10 µL
24-well	500 µL	500 ng/ 25 µL	1.5 µL/ 25 µL
12-well	700 µL	750 ng/ 35 µL	2.25 µL/ 35µL
6-well	1 mL	1 µg/ 50 µL	3 µL/ 50 µL
6 cm	3 mL	2.5 µg/ 150 µL	7.5 µL/ 150 µL
10 cm	6 mL	5 µg/ 300 µL	15 µL/ 300 µL

DNA Safe Stains

Description

DNA Safe Stains is a safe nucleic acid stain to replace traditional ethidium bromide (EtBr, a potent mutagen) for detecting double-stranded DNA, single-stranded DNA, and RNA in agarose gel. It emits green fluorescence when bound to dsDNA and red fluorescence when bound to ssDNA or RNA. DNA Safe Stains products are non-carcinogenic by the Ames-test (negative results in both mouse marrow chromophilous erythrocyte micronucleus and mouse spermary spermatocyte chromosomal aberration tests).

Protocol

1. Prepare hot melting agarose gel solution (concentration from 0.5-2.5%).
2. Add 1 μL of DNA Safe Stains to every 20 mL of gel solution. Swirl gently to mix the solu tion and avoid forming bubbles.
3. Allow the agarose gel to cool until solidified. Load samples on the gel and perform electro phoresis.
4. Visualize the bands under UV illumination.

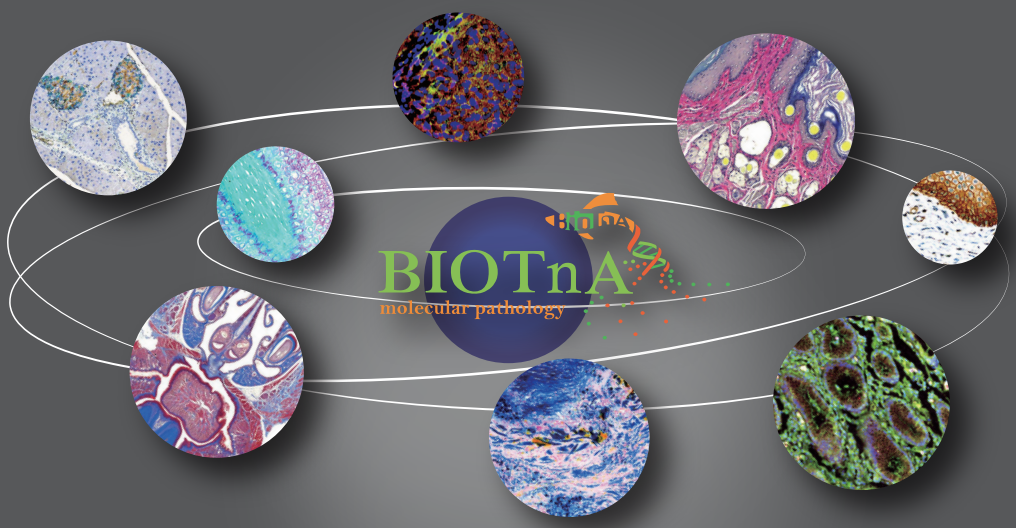
Cat No	Pack size
TAMB22L	1 mL

Storage condition

Store at 4 °C

Note

1. The thickness of gel should be less than 0.5 cm since thick gels may decrease sensitivity.
2. Repeated melting of gels containing DNA Safe Stains may result in low sensitivity.
3. DNA Safe Stains may irritate skin and eyes. Please wear gloves while handing.



BIOTnA
molecular pathology