



# Parstous

Innovation is our Priority

Highly Pure  
Economic  
Molecular Grade  
Research  
Enzymes & Reagents  
Kits



### About Us:

Since september 2008, our company is focused on providing our customers superior quality molecular biology reagents and kits for research and development. Pars Tous' headquartered is in Toos Industrial Zone, Mashhad, Iran and has an office in Tehran. Our innovative formula for these products undoubtedly, yield the same results as products from leading company in the life sciences.



1

PCR Enzymes &  
Reagents  
Page: 2-6

2

Q-PCR Kits  
Page: 8-9

3

DNA & RNA  
Extraction Kits  
Page: 14-18

4

Protein Assay  
Page: 20-22

5

Electrophoresis  
Products  
Page: 24-27

## PCR Enzymes & Reagents



Taq DNA Polymerase  
2X Taq Master Mix  
Hot Start Taq DNA Polymerase - Apta  
Hot Start Taq DNA Polymerase - Chemical  
Pfu DNA Polymerase  
Spidi™ Pfu DNA Polymerase  
dNTP Mix

## PCR Enzymes & Reagents

### Taq DNA Polymerase

It is a highly purified Taq DNA polymerase, produced through chromatography, with an optimized buffer for higher specificity. It comes with an exclusive 10x reaction buffer designed to enhance PCR success when using templates with high secondary structure or GC-rich regions.

**Advantages:**  
Highly purified through chromatography.  
Free of E. coli DNA.  
Suitable for both conventional PCR and TA cloning PCR.



## PCR Enzymes & Reagents

### Hot Start Taq DNA Polymerase - Apta

It is a mixture of Taq DNA polymerase and a temperature-sensitive aptamer-based inhibitor. The inhibitor reversibly binds to the enzyme, suppressing polymerase activity below 40°C but releasing it during standard PCR cycling conditions. This aptamer-based hot start mechanism eliminates the need for a separate high-temperature activation step. It remains inactive at room temperature, preventing extension of non-specifically annealed primers or primer dimers, and enhancing the specificity of DNA amplification. Once activated, it functions like Taq DNA polymerase: it catalyzes 5' → 3' DNA synthesis and lacks detectable 3' → 5' proof-reading exonuclease activity.

**Advantages:**  
Reduces primer dimer formation.  
Requires no inactivation time.  
Helps eliminate non-specific bands.



### 2X Taq PCR Master Mix

This product is a ready-to-use PCR mix containing Taq DNA Polymerase, reaction buffer, dNTPs, protein stabilizer, 2 mM MgCl<sub>2</sub>, tracking dye for electrophoresis, and loading dye. It optimizes the convenience to use by adding sediment for electrophoresis and 2x solution of loading dye.

**Advantages:**  
Highly resistant to adverse storage conditions and frequent freeze-thaw cycles.  
The most convenient way to perform PCR.  
Reduces technical errors.  
Eliminates the need for adding loading dye during electrophoresis.  
More economical.



### Hot Start Taq DNA Polymerase - Chemical

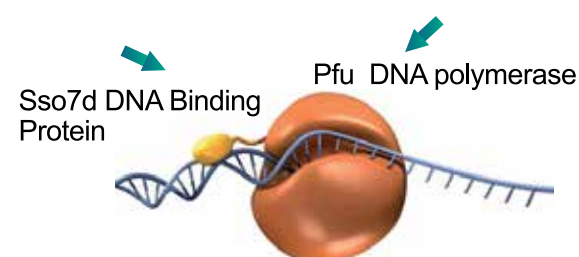
This is a chemically-modified Taq DNA polymerase bound to a heat-labile inhibitor. The inhibitor reversibly binds to the enzyme, suppressing polymerase activity below 60°C but releasing it during standard PCR cycling conditions. This chemically-modified hot start mechanism requires a brief high-temperature incubation step to activate the enzyme. Being inactive at room temperature prevents the extension of non-specifically annealed primers or primer dimers, increasing the specificity of DNA amplification. Once activated, it functions like Taq DNA polymerase, catalyzing 5' → 3' DNA synthesis and lacking detectable 3' → 5' proof-reading exonuclease activity.



## PCR Enzymes & Reagents

### Pfu DNA Polymerase

This product is a recombinant Pfu DNA polymerase is a highly purified enzyme with 3' → 5' proofreading exonuclease activity, resulting in over 10-fold higher PCR fidelity compared to Taq DNA polymerase.



**Advantages:**  
**Pure recombinant enzyme.**  
**Over 10-fold higher PCR fidelity than Taq.**  
**Enhanced performance due to a new buffer formulation.**

### Spidi™ Pfu DNA Polymerase

Spidi Pfu is a chimeric Pfu DNA polymerase with a DNA-binding protein fused to its N-terminal region. This modification enhances the enzyme's processivity and extension rate compared to standard Pfu DNA polymerase, while also maintaining significant activity after exposure to 99°C or repeated exposure to 98°C.

**Advantages:**  
**Faster than standard Pfu DNA polymerase.**  
**Efficient amplification of GC-rich templates.**  
**Suitable for high-fidelity PCR and primer extension reactions, especially for amplicons larger than 3kb.**



## PCR Enzymes & Reagents

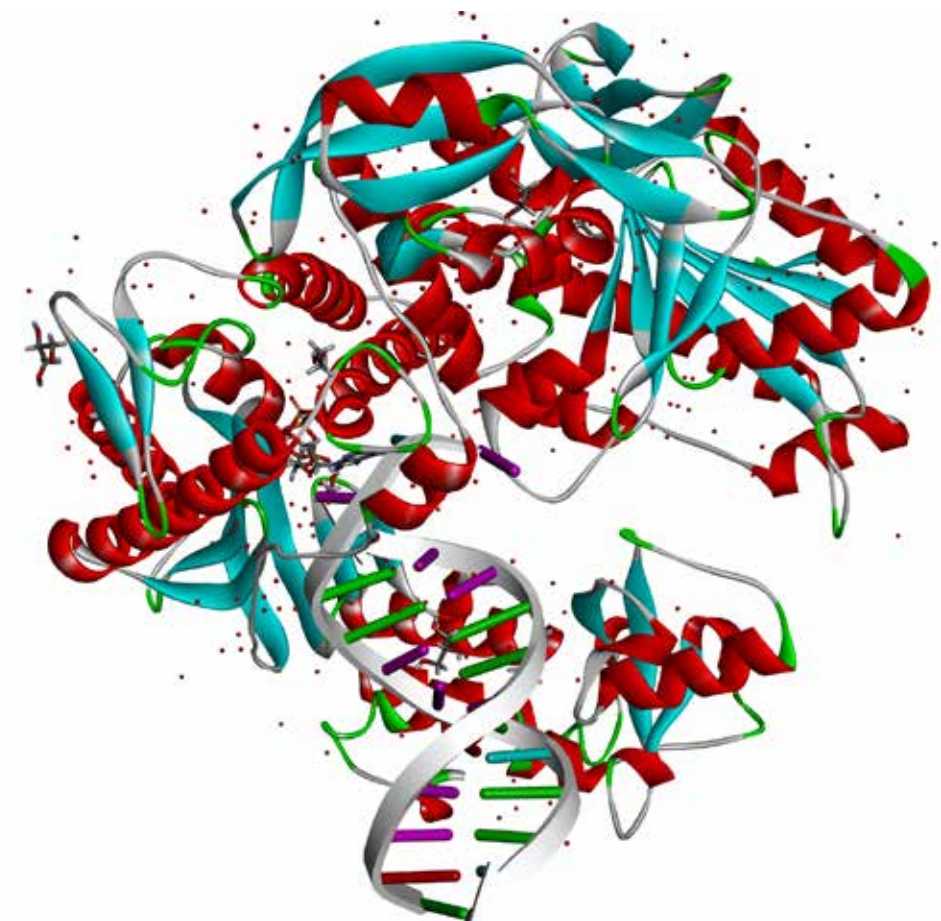
### dNTP Mix

dNTP Mixture is aqueous solutions at pH 7.0 containing dATP, dGTP and dTTP, each at a final concentration of 10 mM. dNTP mix are ready-to-use solutions designed to save time and to provide better reproducibility in PCR and other applications.

Concentration of dNTP Mix is total 40 mM. it means 10 mM dATP, 10 mM dCTP, 10 mM dGTP and 10 mM dTTP.



## Q-PCR Kits



SYBR<sup>®</sup> Green Real Time PCR Master Mix (2X) + Rox  
SYBR<sup>®</sup> Green Real Time PCR Master Mix (2X)

## Q-PCR Kits

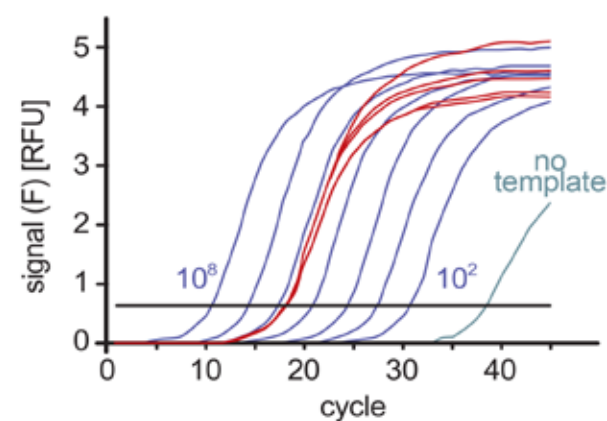
### SYBR® Green Real Time PCR Master Mix (2X)

It is a highly sensitive and user-friendly solution for real-time quantitative analysis of DNA and cDNA targets. This product combines SYBR Green I dye with a dual hot-start Taq polymerase (chemically modified and antibody-mediated) in an optimized buffer solution.

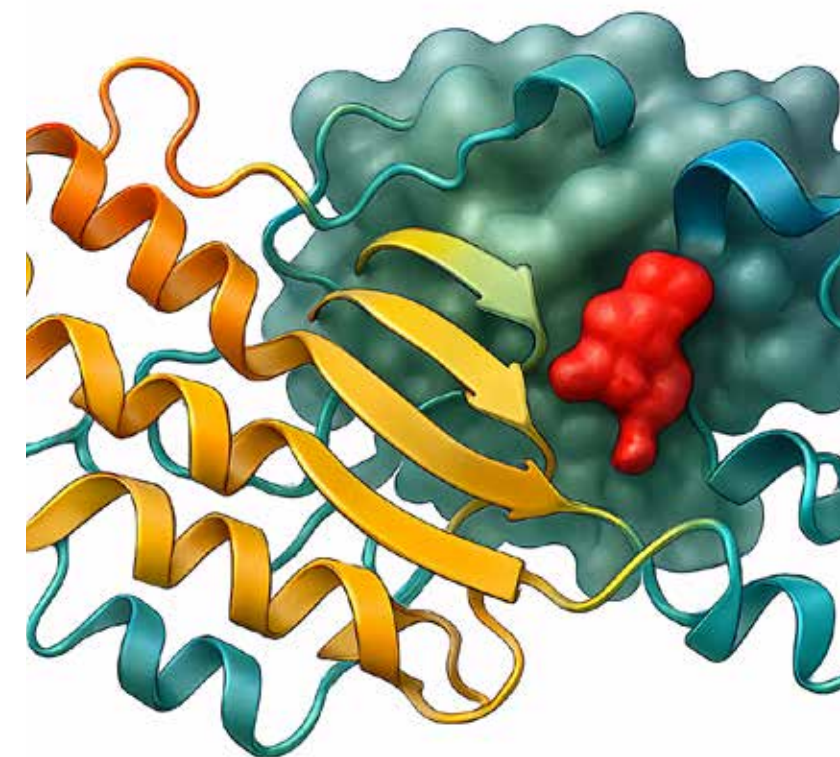
**Advantages:**  
**Cost-Effective**  
**Aptamer-based hot start Taq DNA polymerase**  
**Long-Term stability**  
**Ease of use**  
**Short initial denaturing time**



### SYBR® Green Real Time PCR Master Mix (2X) + ROX



## cDNA Synthesis Kit & Enzyme



Ultra MMLV Reverse Transcriptase Enzyme  
Ultra cDNA Synthesis Kit



## Ultra cDNA Synthesis Kit

Easy cDNA Synthesis kit contains all necessary components for conversion of total RNA or mRNA to the single stranded cDNA. The 2X Buffer mix solutions contains, RT buffer, 1mM dNTP mixture, 8mM MgCl<sub>2</sub>, Oligo d(t)16, Random hexamer and stabilizer. Enzyme mix contains thermostable H-minus MMLV, RNase Inhibitor and stabilizer.

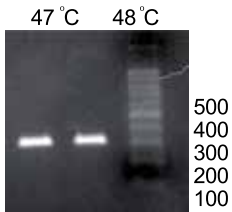
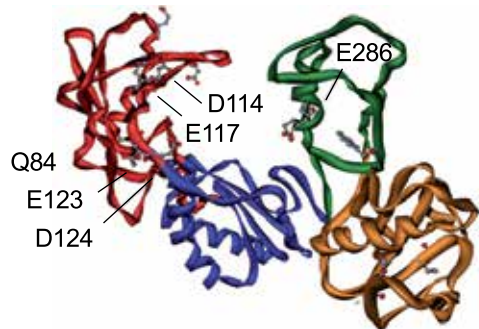
- Advantages:**
- Reduction of technical errors.
  - Easy protocol.
  - Higher reaction temperature than conventional MMLV.
  - High yield and sensitive.



## Ultra MMLV Reverse Transcriptase Enzyme

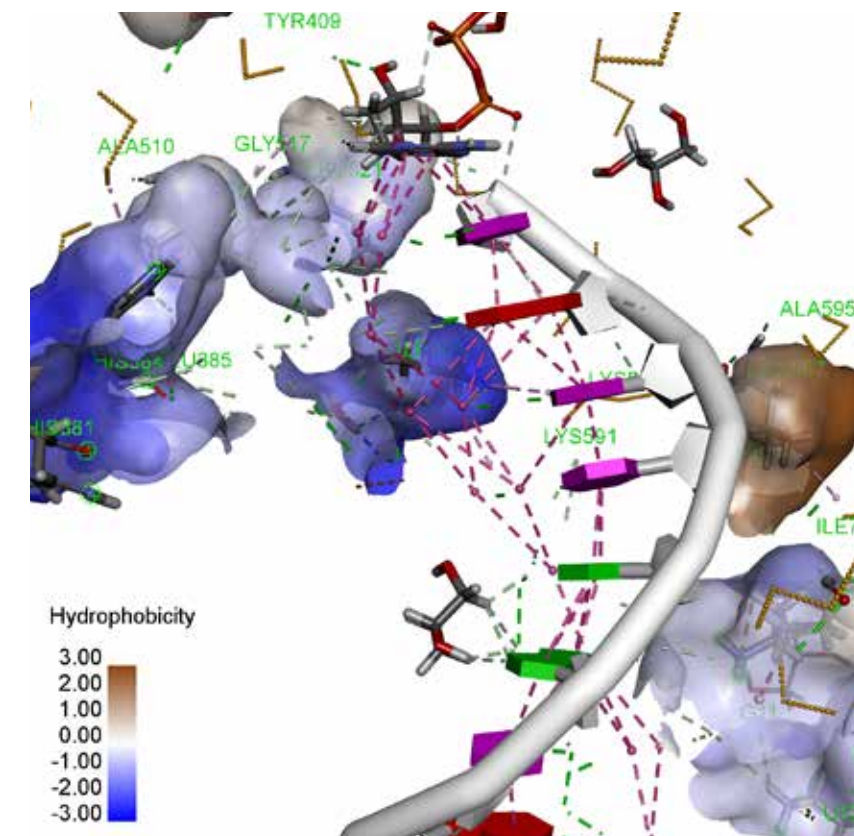
Recombinant, genetically modified RNA-dependent DNA polymerase, chromatography purified, no RNase H activity, Optimal activity at 47 °C. Reverse Transcriptase has no RNase H activity. Therefore, degradation of RNA does not occur during first strand cDNA synthesis, resulting in higher yields of full-length cDNA from long templates compare to other reverse transcriptases.

- Advantages:**
- Optimal activity at 47- 48°C.
  - RT of RNAs with a high degree of secondary structure.
  - No RNase H activity.
  - More stable than Wild type MMuLV.



# DNA & RNA

## Extraction Kits



Total RNA extraction Kit  
Plant RNA extraction Kit  
Blood RNA extraction Kit  
RNAFix Solution  
Blood genomic DNA extraction Kit  
Tissue DNA extraction Kit  
Bacteria DNA extraction Kit  
Plant DNA extraction Kit

## Total RNA extraction Kit

This kit uses reversible binding properties of a silica-based column. The sample is lysed first under highly denaturing phenolic buffer condition to protect tissue RNA from degrading. Tissue RNA Kit allows simultaneous processing of multiple tissue samples in less than 30 min. The procedure completely removes contaminants and enzyme inhibitors making RNA isolation fast, convenient, and reliable.

### Applications:

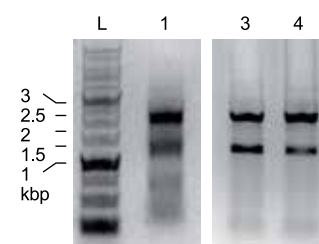
**RNA extraction from animal tissues, cell culture and blood.**

**L: 1 kbp DNA Ladder**

**1: 10 µl RNA from Blood**

**2: 5 µl RNA from J774 cells**

**3: 5 µl RNA from Hela cells**



## Blood RNA extraction Kit

Blood RNA Kit is designed for a silica spin-based isolation of total intracellular RNA from up to 200 µL of fresh, or frozen whole blood treated with any common anticoagulant such as heparin, EDTA or acid-citrate-dextrose. The procedure completely removes contaminants and enzyme inhibitors making total RNA isolation fast, convenient and reliable.

Cell lysis, RNase inactivation and DNA removal are carried out by phenol-base solution. After separation of RNA containing section and addition of RNA enhancer, the lysate will be applied to a spin column. Cellular debris and other contaminants such as hemoglobin are effectively washed away and high-quality RNA is finally eluted in DEPC-treated water.

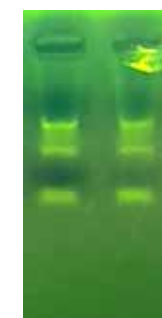
### Applications:

**Low sample size 200 µl**

**Fast and easy protocol**

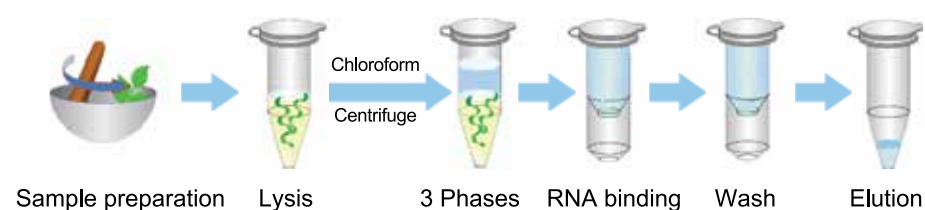
**DNA depletion**

**Suitable yield 1-4 µg**



## Plant RNA extraction Kit

Plant RNA Kit provides a convenient spin column-based method for the isolation of total RNA from a variety of plant samples. Samples should be homogenized in lysis buffer before starting the process. All the contaminants including polysaccharides and phenolic compounds are effectively removed. Purified RNA can be used for most downstream applications such as RT-PCR, Northern blot analysis, differential display, and poly A+ RNA selection.



## RNAfix™ Solution

RNAfix™ is an aqueous, non toxic, tissue and cells storage solution intended for the preservation of RNA for later isolation. It is a preservation solution that allows recovery of intact RNA from tissues and cell culture. Samples in RNAfix™ solution can be stored indefinitely at -20 °C with no RNA degradation. RNAfix™ solution can be used for the storage of tissues, cells, bacteria and yeasts. RNAfix™ compatible with most RNA isolation methods.

RNA isolated from three cell culture sample stored at:  
-20°C    4°C 1W    40°C 6W



## Blood genomic DNA extraction Kit

A silica-membrane-based DNA purification for up to 200 µl fresh or frozen human whole blood. Expected yields of 4–10µg depending on the white blood cell count of the sample. High-quality DNA without any organic extraction or alcohol precipitation.

### Applications:

Genomic DNA extraction from human and animal blood, serum and plasma.

### Easy protocol.

No precipitation step.

Preparation time for a single sample is less than 30 minutes.

Purified DNA is fully digestible with all restriction enzymes tested, and is completely compatible with downstream applications.



## Bacteria DNA extraction Kit

This kit is designed for the rapid spin column preparation of genomic DNA from 2 x 10<sup>9</sup> viable bacterial cells (between 0.5 and 1.0 mL of culture).

This kit can be used for both Gram-negative and Gram-positive bacteria including Escherichia coli and Bacillus cereus. Purified genomic DNA is of an excellent quality and yield.

### Advantages:

Rapid and convenient spin column protocol.

High yield, high quality DNA for sensitive downstream applications including sequencing, PCR, qPCR and more.



## Tissue DNA extraction Kit

This kit employs proteinase K and chaotropic salt to lyse cells and degrade protein, allowing DNA to be easily bound by the glass fiber matrix of the genomic DNA spin column.

### Applications:

Genomic DNA extraction from liver, kidney, brain, and many animal tissues.

### No precipitation step.

Preparation time for a single sample is less than 45 minutes.

Purified DNA is fully digestible with all restriction enzymes tested and is completely compatible with downstream applications.



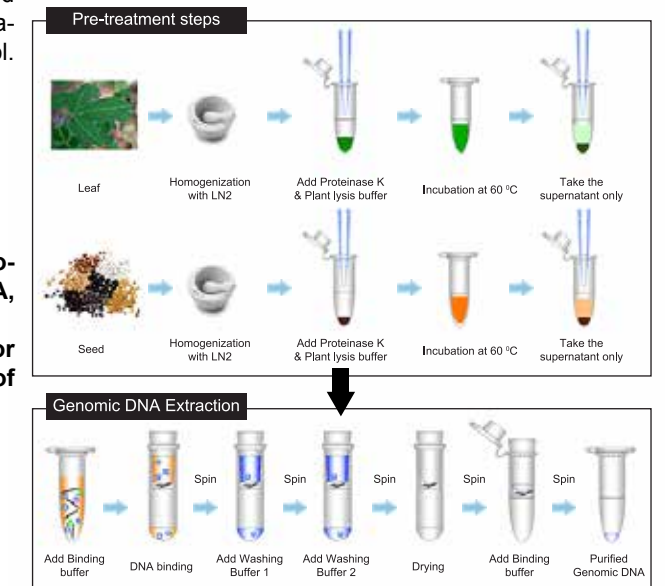
## Plant DNA extraction Kit

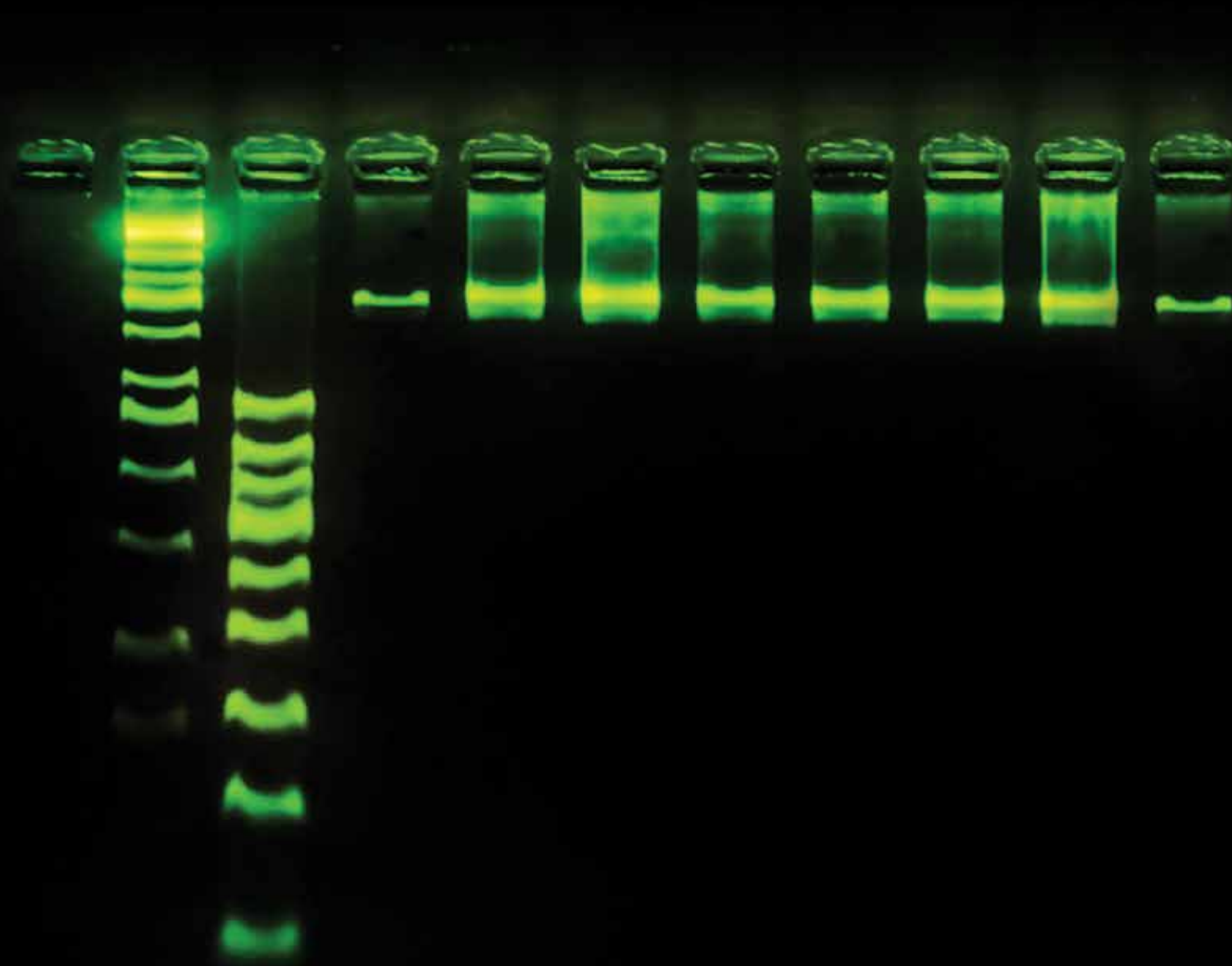
Plant DNA Kit provides a simple, efficient column-based method for the isolation of genomic DNA from a wide variety of plant materials, without the need for hazardous reagents such as phenol.

### Advantages:

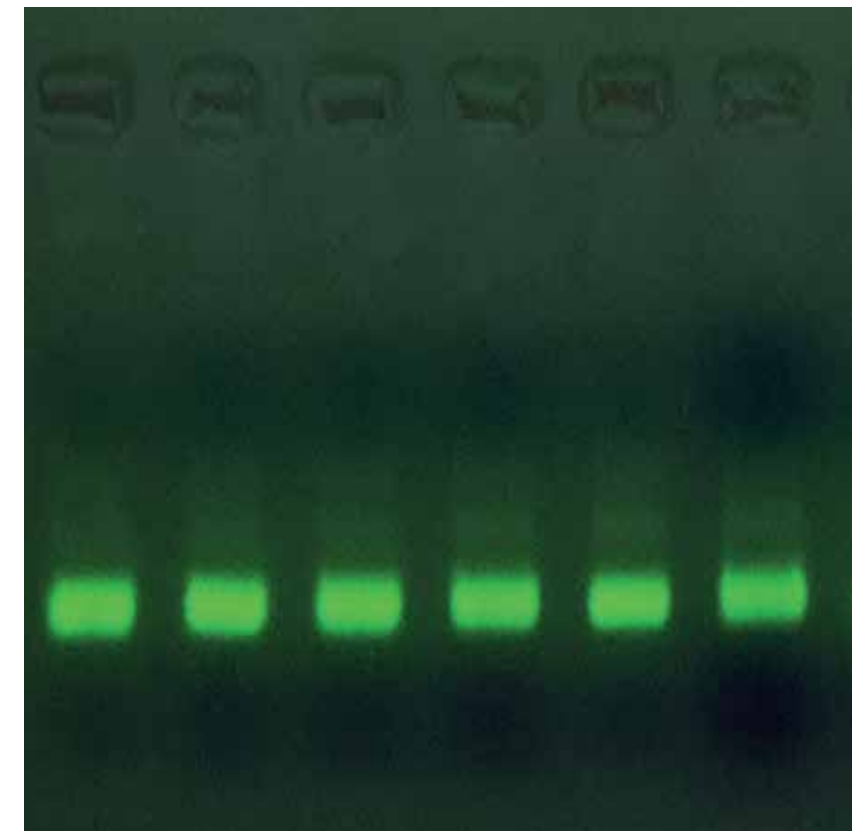
Fast and Convenient: Kit includes all necessary components High-performance – extraction of high-quality DNA, ideal for use in all downstream applications.

Efficient: Optimized lysis conditions and column matrix for improved recovery of genomic DNA from a wide range of plant samples.





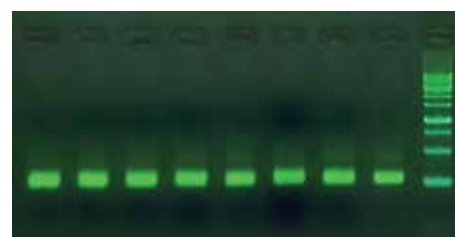
## Electrophoresis Products



DNA Green Viewer™  
DuoColor™ Loading dye  
TriColor™ Loading dye  
TBE buffer  
TAE buffer  
100bp Ladder

## DNA Green Viewer™

The Low Molecular Weight Protein Marker for SDS electrophoresis is a liquid mixture of six purified proteins ranging from 14,400 to 97,000 Dalton when used in denaturing polyacrylamide.



**DNA Green Viewer™ is as sensitive as EB**  
**Most economic safe nucleic acid stain**



## DuoColor™ Loading dye (6X)

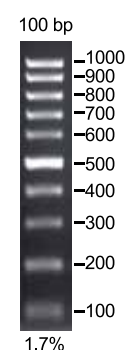
The dye is used for loading DNA samples into gel electrophoresis wells and tracking migration during electrophoresis. See the below detail for an estimation of the migration distance of the tracking dyes contained in DuoColor 6x loading dye.

**Orange G dye runs faster than Bromophenol blue or xylene cyanol FF dyes in standard agarose gels.**  
**Orange G dye migrates with DNA between 10 and 20 nucleotides long.**



## 100bp Ladder

The 100 bp DNA Marker consists of 11 DNA fragments ranging in size from reference on agarose gels, the 500 bp and 1000 bp are two to three times brighter than the other bands.



## TriColor™ Loading dye (6X)

The dye is used for loading DNA samples into gel electrophoresis wells and tracking migration during electrophoresis. See the below table for an estimation of the migration distance of the tracking dyes contained in TriColor 6x Loading Dye.

**Orange G Dye runs faster than Bromophenol blue or xylene cyanol FF dyes in standard agarose gels.**  
**Orange G dye migrates with DNA between 10 and 20 nucleotides long.**



## TBE buffer (10X)

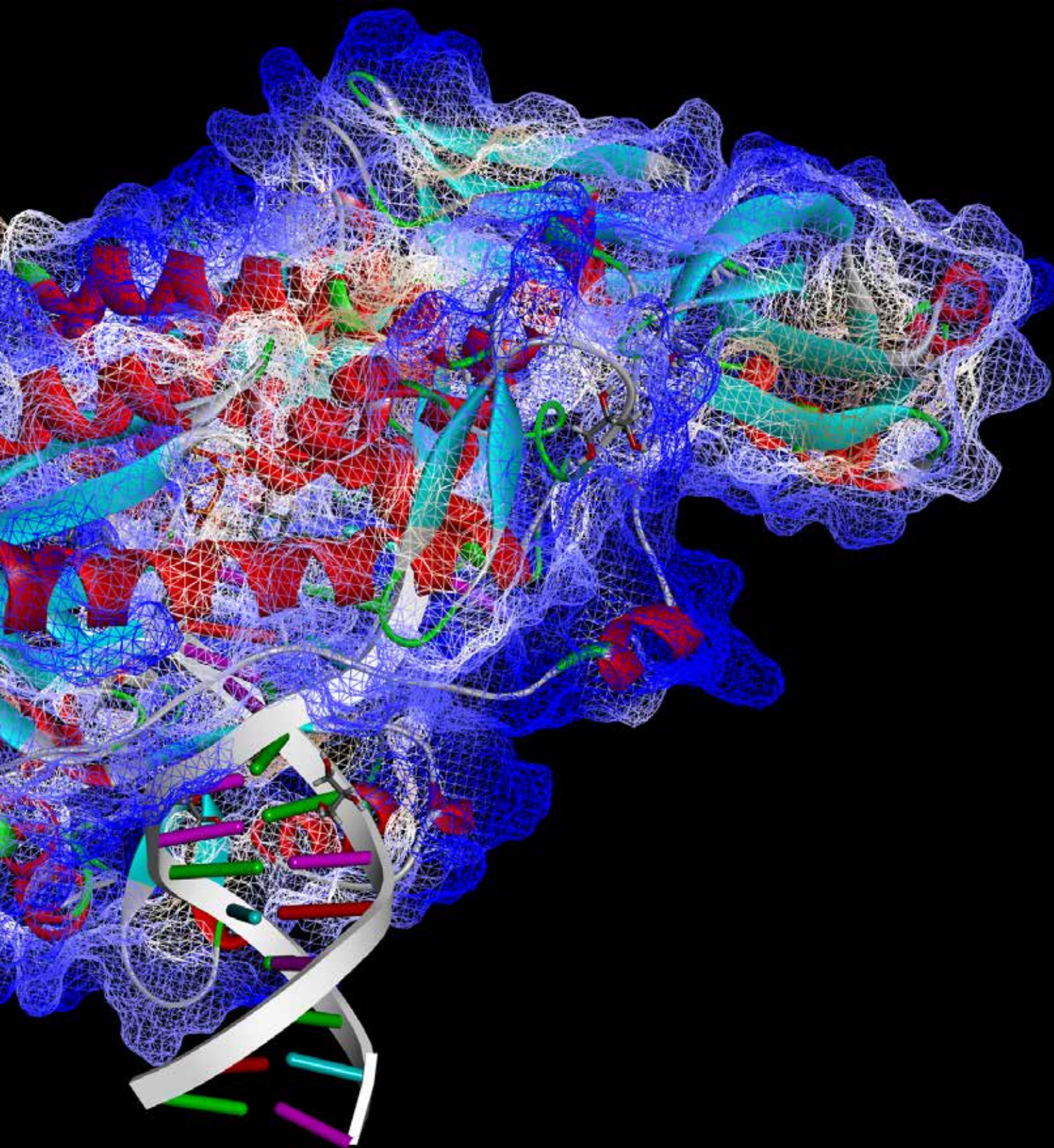
Highly pure reagents have been also provided for preparation of electrophoresis buffers. These buffers are used to prepare agarose gels and as an electrophoresis running buffer for the separation of double-stranded DNA in agarose and polyacrylamide gels.



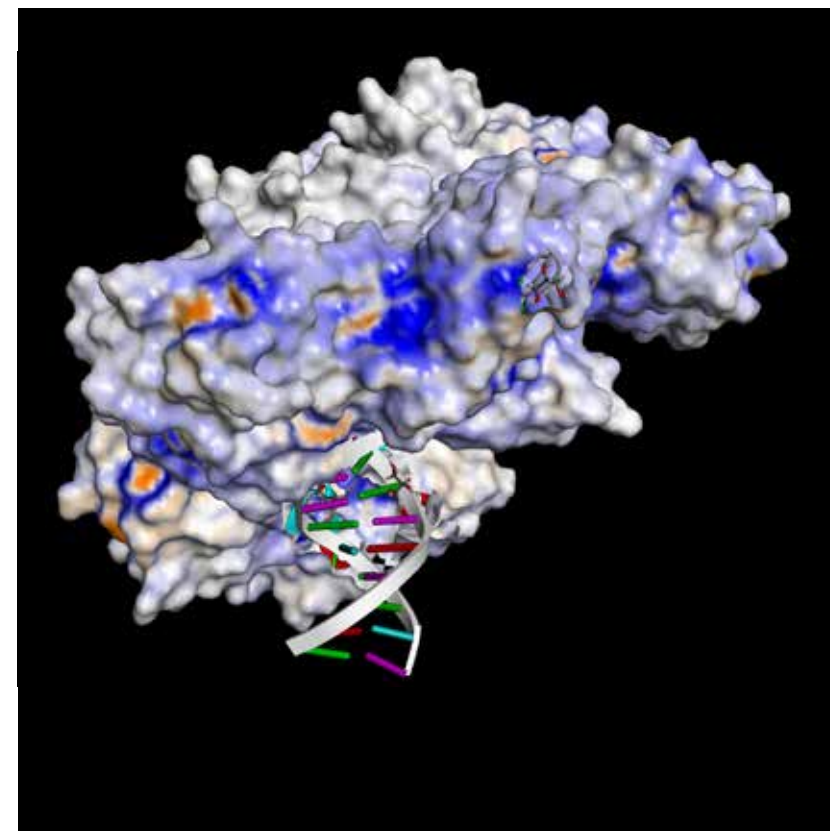
## TAE buffer (50X)

Use 50x Tris/Acetic Acid/EDTA (TAE) for electrophoresis of nucleic acids.  
Compatible with horizontal agarose and vertical polyacrylamide gels  
Use with nondenatured and denatured DNA and nondenatured RNA  
Unlike TBE, it does not interfere with the activity of some downstream enzymes such as ligases  
Made with 18  $\Omega$  water





## Apoptosis & Protein Assay



Annexin V  
LMW Protein Marker  
Chemiluminescence Detection kit  
BCA Protein Quantification Kit  
Ni-IDA Column Kit  
IPTG  
BSA

## Annexin V Apoptosis Detection Kit (FITC)

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## Chemiluminescence Detection kit

This kit is recommended for horseradish peroxidase (HRP)-based Western Blotting procedures. Provided as a two-component system, Solution A and Solution B. The chemiluminescent light emitting can be quantitatively detected via regular autoradiograph film, CCD camera, or chemiluminescence reading device.

Suitable for western blotting and dot blot  
More sensitive than DAB and Alpha-naphtol



## Low Molecular Weight Protein Marker

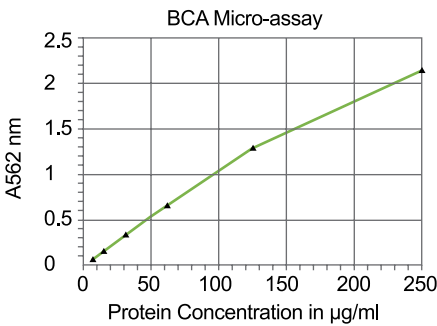
The Low Molecular Weight Protein Marker for SDS electrophoresis is a liquid mixture of six purified proteins ranging from 14,400 to 97,000 Dalton when used in denaturing polyacrylamide.

Mw (kDa) 12.5%



## BCA (Bicinchoninic acid) Protein Quantification Kit

BCA kit utilizes a copper(Cu<sup>2+</sup>) salt which can be reduced to the cuprous state by protein(s). The BCA Protein Assay is suitable for measuring of protein concentration in the range of 5-1000 µg/ml.

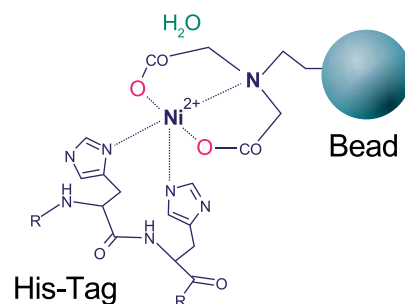


Less protein-to-protein variation.  
Less affected by ionic and nonionic detergents.  
Detection down to 5µg/ml with the enhanced protocol.



## Ni-IDA Column for purification of His-tag proteins Kit

Ni-IDA beads enable fast and convenient purification of recombinant polyhistidine-tagged proteins by immobilized metal ion affinity chromatography (IMAC). This gel is rechargeable for more than ten times without reduction in the yield.



**Purification in non-denaturing condition.**  
**Purification in denaturing condition.**  
**High yield and specific.**  
**Very economic.**

## BSA

## IPTG



Unit 18, North East Food & Biotechnology  
Park, Toos Industrial Zone, Mashhad, Iran.



Tel: (+98 51) 35420843-5  
Fax: (+98 51) 35420846



[www.parstous.com](http://www.parstous.com)  
[info@parstous.com](mailto:info@parstous.com)



@ parstousbiotec  
@ parstousBiotech