

# Introducing new Diffinity™ technology

Diffinity Genomics has developed an innovative new technology that removes undesirable impurities from PCR reactions leaving you with nothing but purified DNA — fast!

This revolutionary technology effectively removes dNTPs and primers while providing greater than 90% recovery of pure DNA fragments ranging in length from 100bp to 10Kb. It dramatically reduces the amount of time to purify and prepare PCR reactions for use in downstream applications, such as DNA sequencing, SNP analysis, and microarray printing.

## Diffinity RapidTip™ — it's all in the tip!

Purification of PCR products in one minute!  
No bind-wash-elute, enzymes, or magnetic beads!

The Diffinity RapidTip functional pipette tip contains everything you need for PCR purification. The tip is filled with our proprietary adsorption technology that has a differential affinity for PCR reaction components. The impurities (e.g., single-stranded primers and nucleotides used in the PCR process) are removed from the solution as it enters the pipette tip. Dispensing the solution yields purified, high quality DNA ready to use in your next application. You don't need to use any capital equipment, reagents or buffers, or enzymes — **all you need is a pipettor.**

### Protocol — only a single purification step!

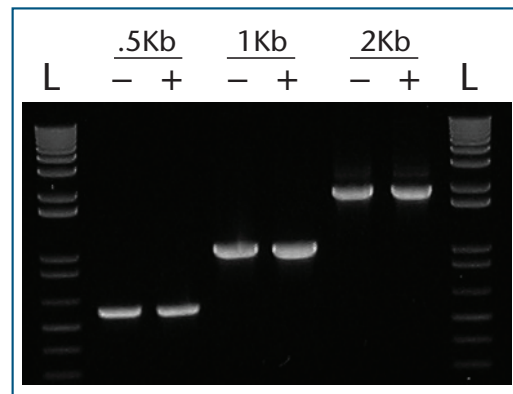
#### Materials & Equipment

- Diffinity RapidTips — pre-packed with our proprietary material and ready to use out of the box!
- A standard pipettor — single or multi-channel.
- Microfuge tubes to store purified DNA.

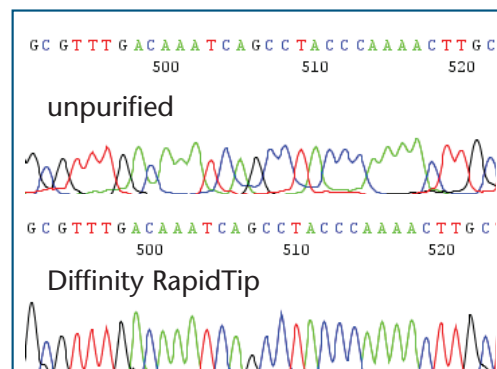
#### Method

- Attach one or more of our pipette tips to a standard P100/P200 pipettor (single or multi-channel).
- Aspirate PCR product into the pipette tip and mix by pipetting up and down for approximately one minute.
- Dispense purified PCR product into a clean tube or well and dispose of the tip in normal laboratory trash — that's it!

#### Results



Diffinity RapidTip Purification has excellent yield. Equal volumes of untreated (-) and Diffinity RapidTip treated (+) PCR product (.5Kb, 1Kb, 2Kb) were run on a 1% agarose gel alongside Invitrogen 1Kb Plus ladder (L) and labeled with SybrSafe.



Diffinity RapidTip purification improves sequence quality. Sequence chromatograms show improved peak quality and lower background in Diffinity RapidTip purified samples as compared to unpurified samples.

# Features and Benefits of Diffinity Products

## Excellent Yield

- Recovers up to 90% of high quality dsDNA ready to use in subsequent applications.

## One Minute, One Step

- Extremely fast and efficient process to rapidly recover clean DNA.

## Cost Effective

- No capital equipment (e.g., centrifuge, magnetic extractor, vacuum manifold), extra plasticware, or liquids are required. Less labor time required due to simple protocol.

## Robot Compatible

- Easily integrated on automated equipment for high throughput processing and increased productivity. Same purification process, eliminates additional process validation.

## No Bind-Wash-Elute Steps

- Eliminates use of large amounts of reagents and time-consuming, tedious protocols.

## Effective Purification

- Greater than 95% removal of primers, ssDNA, and primer dimers

## Large Range of Fragment Length

- Returns pure DNA fragments of 100bp to 10Kb.

## Easy to Use

- Single step protocol requires little to no training of lab personnel. Simple protocol requires no complex operator techniques or interactions with equipment, buffers, or reagents.

## Environmentally Friendly

- Waste is limited to the functional tip. No extra materials, tips, columns, buffers, or reagents required to purify PCR product.

## Seamless Workflow

- Uses standard pipettor so no changes are needed to your current lab workflows.

