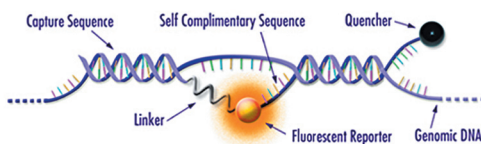
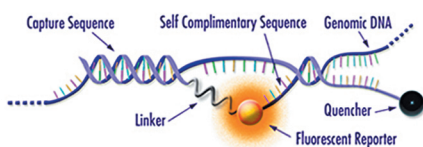
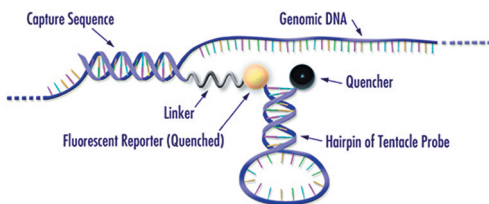
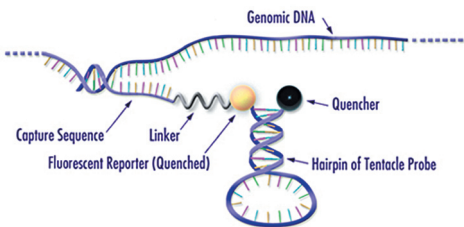
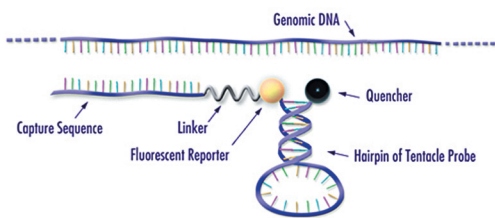


Arcxis Biotechnologies® Tentacle Probes®

As with all molecular tests, both **maximum sensitivity** and **target specificity** is the ideal. Through Arcxis Biotechnologies' patented Tentacle Probes® technology, the ideal has been realized. Capture probes effectively grasp all nuclear material present in the sample, acting as a highly effective nucleotide adhesive. Simultaneously, detection probes act to capture only the specifically targeted nuclear material sought. These two symbiotic steps act in concert to provide unmatched analytical performance.



Tentacle Probes incorporate three separate regions. Each region confers different properties. One region is a hairpin structure similar to molecular beacons for enhanced specificity, but it is modified by the addition of a capture probe for increased kinetics and affinity. Tentacle Probes produce kinetic rate constants up to 200-fold faster than molecular beacons with corresponding stem strengths.

The Capture Sequence of the Tentacle Probe, usually 15-20 base pairs in length, is designed to bind to the target part of the genomic DNA. The fluorescent reporter is held in close proximity to the non-fluorescent quencher by the self complementary part of the Tentacle Probe hairpin and is therefore inhibited from emitting light.

Complete binding of the capture sequence to the genomic DNA places the self complementary part of the Tentacle Probe hairpin next to a downstream sequence of the genomic DNA.

The hairpin of the Tentacle Probe contains a loop of sequence that is complementary to the target sequence by approximately 15-18 base pairs which is enough to disrupt the self complementary sequence of 6-9 base pairs and start to bind to the genomic DNA.

A perfect match will result in the self complementary part of the hairpin dissociating completely and the probe will fluoresce since the reporter and non-fluorescent quencher are no longer in close proximity.

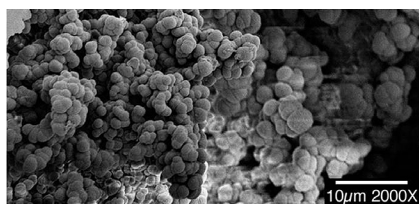
Tentacle Probes Technology Delivers:

- Dual Probe Efficiency
- Comprehensive Nucleotide Sensitivity
- Optimized Target Specificity

ArcHyb™ SeqSelect Purification Technology* Sequence Specific Oligonucleotide Capture

For manual amplification-ready nucleic acid in 40 minutes or less

Arcxis Biotechnologies is developing an oligonucleotide capture technology that combines the high efficiency of polymeric binding substrates with proprietary biochemistry techniques to provide enriched sequence-specific target analytes for downstream analysis, using standard laboratory equipment.



Porous Polymer Monoliths

- Uniquely effective filtration system
- High surface area
- Formed in place in any shape

Technology demonstrated in ArcPure™ spin column, Xisyl™ cartridge, and BioPhalanx capillary formats.

ArcHyb Technology Delivers:

- Sequence Selective Extraction
- Purified Nucleic Acids in < 40 Minutes
- Reliable Removal of All Relevant Contaminants & Inhibitors
- Simplified Work Flow

Procedure:

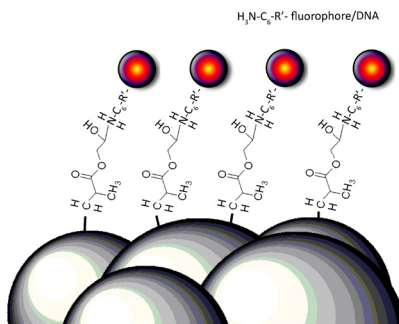
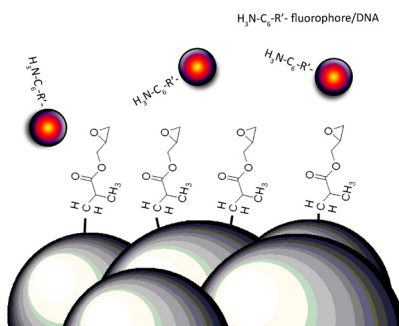
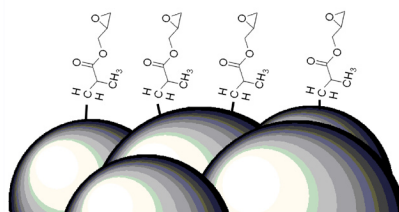
- Cell Lysis
- Nucleic Acid Binding
- Wash
- Elution

*Under Development

Arcxis Biotechnologies® is a registered trademark of Arcxis Biotechnologies. Tentacle Probes® is a registered trademark of Arcxis Biotechnologies. ArcHyb is a trademark of Arcxis Biotechnologies.

Copyright 2009 Arcxis Biotechnologies.
All rights reserved

MKTG-0012 November 12, 2009.



Porous polymer monoliths are comprised of bridged polymer networks that contain a backbone of epoxy functional groups. Rather than having an epoxy surface, the polymers themselves are activated epoxy molecules.

These electrophilic polymers readily react with any nucleophilic molecule, such as an amine group. Activated epoxide groups form covalent bonds with amino labeled oligonucleotide probes.

Using this robust chemistry, virtually any oligonucleotide can be attached to the ArcHyb columns and subsequently used for sequence selective analyte extraction.



Arcxis Biotechnologies

6920 Koll Center Parkway, Suite 215
Pleasanton, CA 94566
+1.925.461.1300
www.arcxis.com