



# UltraAmp™

## Signal Amplifiers

Genisphere's UltraAmp reagents are 3DNA dendrimers customized with a variety of labels and targeting moieties, to increase the sensitivity in any immunoassay or nucleic acid detection assay.

Genisphere®

SIGNAL + SAMPLE AMPLIFICATION PRODUCTS



Genisphere's core technology is the 3DNA Dendrimer. 3DNA Dendrimers are made from natural strands of DNA that hybridize together in a certain way, making them double-stranded in the middle, and single stranded on the ends (monomers). By hybridizing monomers together in a step-wise fashion, dendrimers are grown bigger and bigger. Known DNA sequences are on the single-stranded ends of the periphery of the structure, to which targeting moieties and labels are attached.

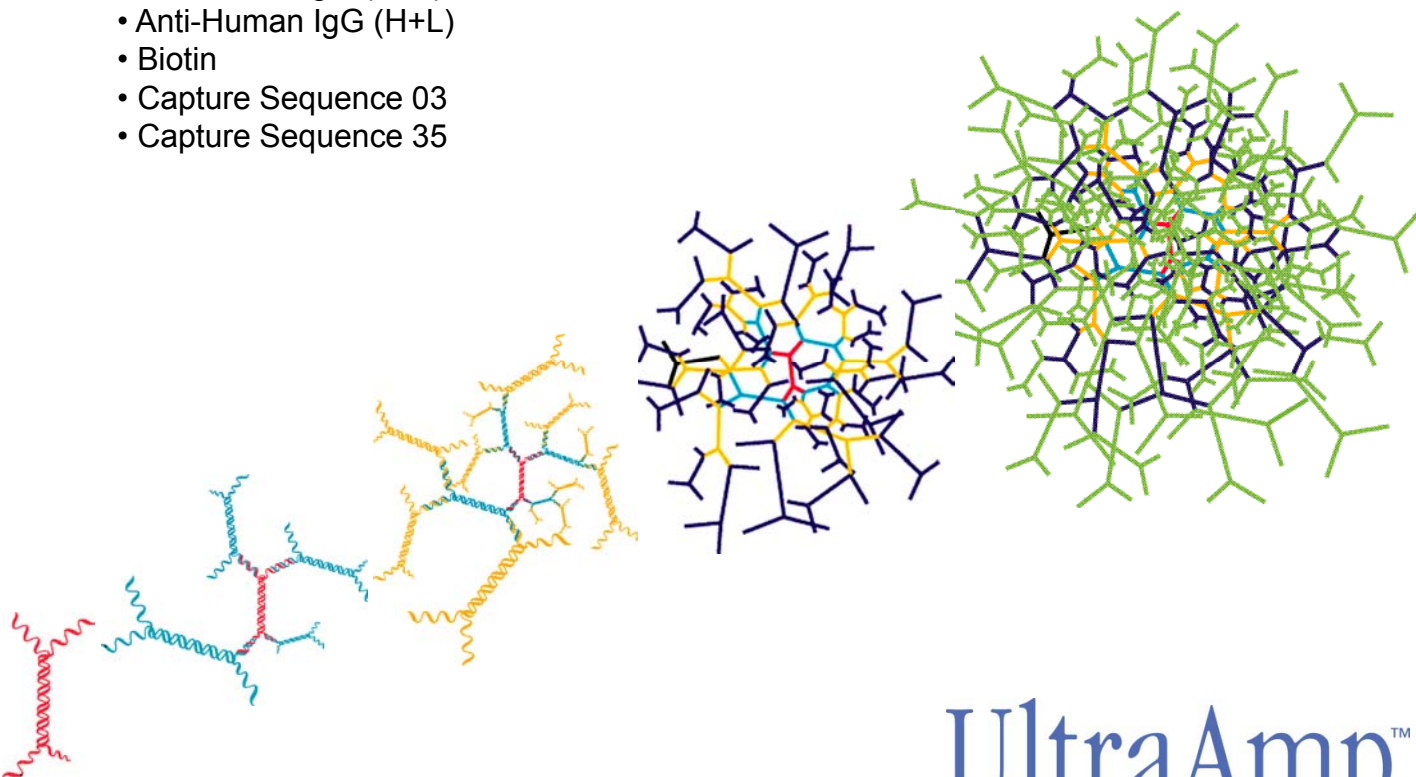
UltraAmp products are single-tube dendrimer reagents, customized with a variety of specificities and labels. The advantage of dendrimers is their ability to deliver multiple (hundreds) labels to their targets. UltraAmp reagents can be used to amplify the signal in a variety of immunoassays and nucleic acid detection assays.

#### **TARGETS**

- Anti-Biotin
- Anti-Streptavidin
- Anti-FITC
- Anti-Phycoerythrin
- Anti-Mouse IgG
- Anti-Rabbit IgG (H+L)
- Anti-Human IgG (H+L)
- Biotin
- Capture Sequence 03
- Capture Sequence 35

#### **LABELS**

- Oyster-550
- Oyster-650
- Biotin
- 50, 350, or 900 labels



UltraAmp™

# Fluorescent Streptavidin Signal Amplifiers

Genisphere has taken small 3DNA dendrimers and labeled them with fluorescent dyes, Oyster-550 and Oyster-650. These fluorescently labeled 3DNA dendrimers are conjugated to Streptavidin, allowing for detection of biotinylated targets. With ~40 fluorescent dyes per Streptavidin the signal amplification over common SA-dye labeling systems is significant.

## UNLIMITED SENSITIVITY AND FLEXIBILITY

- Provides up to 40 fold improvement in sensitivity.
- Single tube replacement for any SA-Fluorescent Dye conjugate.
- Compatible with existing protocols.

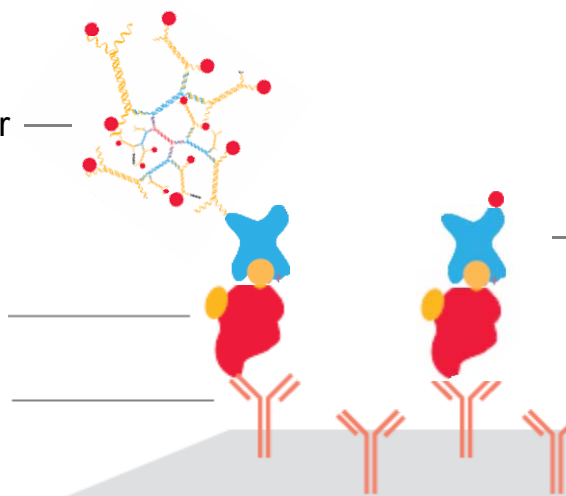
## COMPATIBLE WITH NUMEROUS APPLICATIONS

- Nucleic Acid Arrays
- Protein Arrays
- Flow Cytometry
- Cellular Imagery
- Immuno Histo Chemistry (IHC)
- Fluorescent *In-Situ* Hybridization (FISH)
- Lateral Flow
- BioSensors

UltraAmp  
Streptavidin  
Signal Amplifier  
(40 fluors per  
molecule)

Biotinylated  
Antigen

Capture  
Antibody



Standard Streptavidin  
Fluorescent Conjugate

## Catalog Numbers

**SA0450 UltraAmp Streptavidin Oyster-550 (40)**

**SA0460 UltraAmp Streptavidin Oyster-650 (40)**

UltraAmp™

# Peptide Arrays

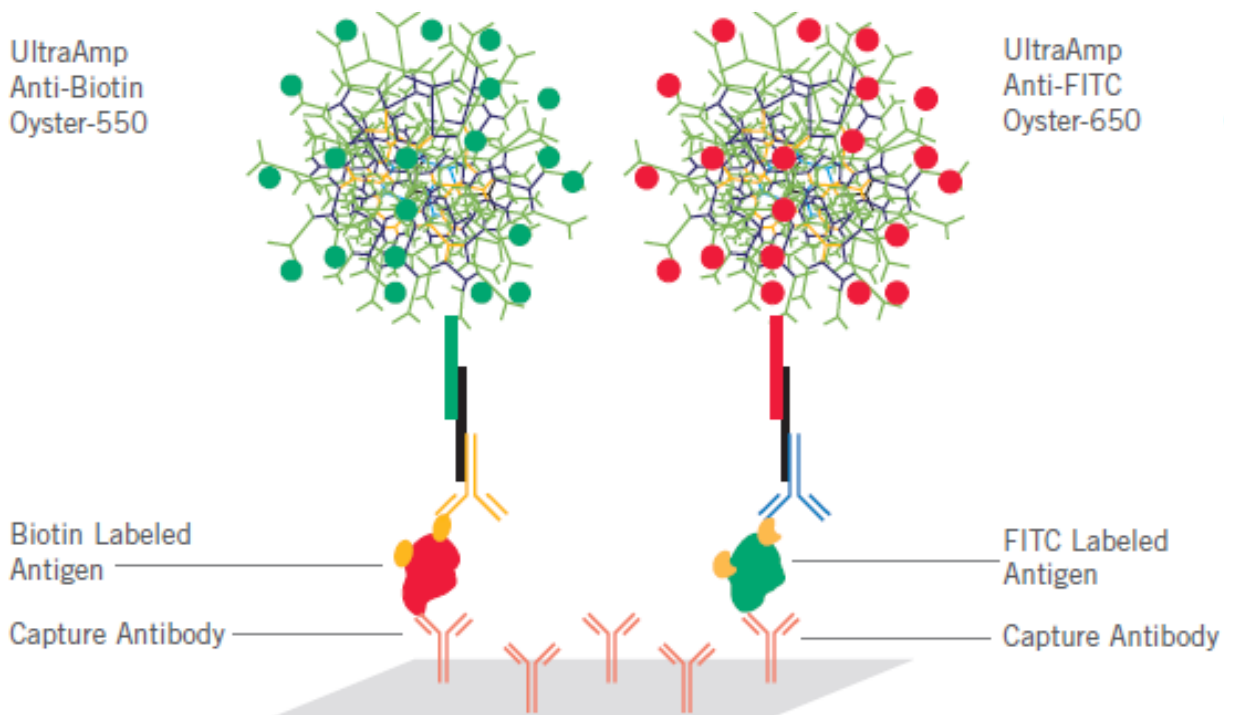
UltraAmp Multi-Assay Signal Amplifiers have been tested successfully to increase the sensitivity in Peptide Arrays and Protein Arrays. Single-color or dual-color detection is achieved with Anti-Biotin Oyster-550 (350) and Anti-FITC Oyster-650 (350) reagents.

## TARGET LABELING

- Label target (Immunoglobulin, Antigen, etc.) with Biotin or FITC
- Hybridize to array overnight

## SIGNAL DETECTION

- Dilute fluorescent UltraAmp reagents in UltraAmp Binding Buffer II
- Hybridize to array for 3 hours
- Scan and capture data



**UltraAmp Reagents**  
**Anti-Biotin Oyster-550 (350)**  
**Anti-FITC Oyster-650 (350)**

UltraAmp™

# High-Throughput Bead-Based Assays

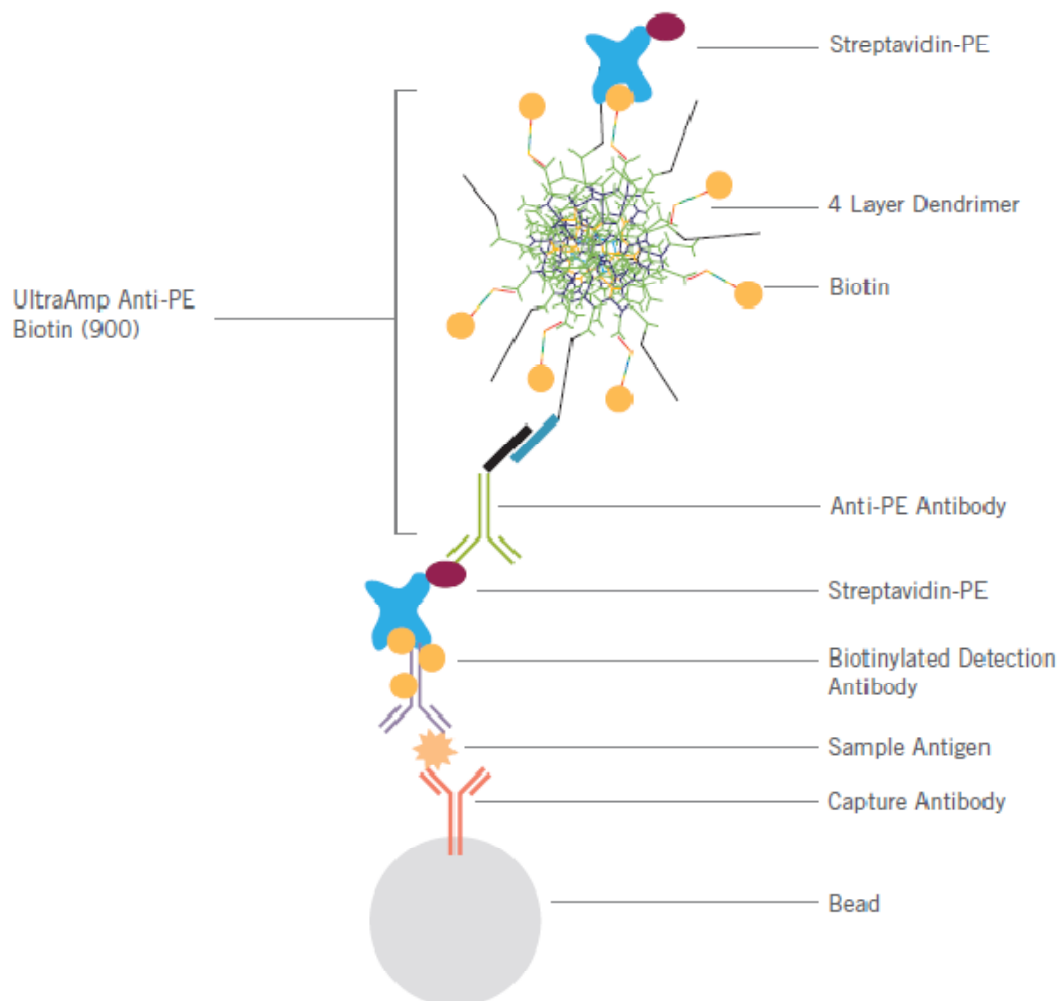
UltraAmp Multi-Assay Signal Amplifiers have been tested successfully to increase the sensitivity in bead-based assays. Both immunoassays and nucleic acid detection assays are enhanced by using UltraAmp Anti-PE Biotin.

## ASSAY PROCEDURE

- Incubate cell lysate to fluorescent beads containing capture antibodies
- Add biotinylated detection antibodies

## SIGNAL DETECTION

- Add SA-PE and UltraAmp Anti-PE Biotin
- Add SA-PE and detect on flow instrument



**UltraAmp Reagents**  
**Anti-PE Biotin (50)**  
**Anti-PE Biotin (900)**

UltraAmp™

Genisphere LLC.  
2801 Sterling Drive  
Hatfield, PA 19440

Email: [info@genisphere.com](mailto:info@genisphere.com)

Tel: 877.888.3DNA  
215.996.3002

Fax: 877.FAX.3DNA  
215.996.3070

Web: [www.genisphere.com](http://www.genisphere.com)

**Genisphere**<sup>®</sup>

SIGNAL + SAMPLE AMPLIFICATION PRODUCTS