



XCellCure, LLC AMiAware™ Microarray
Reporting the Earliest Warning of a Heart Attack
Using Evidence Based Prognostic and Diagnostic Proteins

AMiAware™ Microarray ISO 13485 patented MIP1-alpha, RANTES, PARC, HFABP, dPaPPA, hsCRP, hs cTnI, PIGF, Nt-proBNP, IP-10, MIC-1, MCP-1, Cystatin C

- **Proprietary new cardiac marker panel provides rapid and sensitive state-of-the-art clinical insight on heart tissue damage and viability,^{1 2 3}**
- **Broadest combination of prognostic and diagnostic cardiac markers available to optimize convenience and efficiency,**
- **Provides critical information to support prognosis and clinical treatment protocols.⁵**

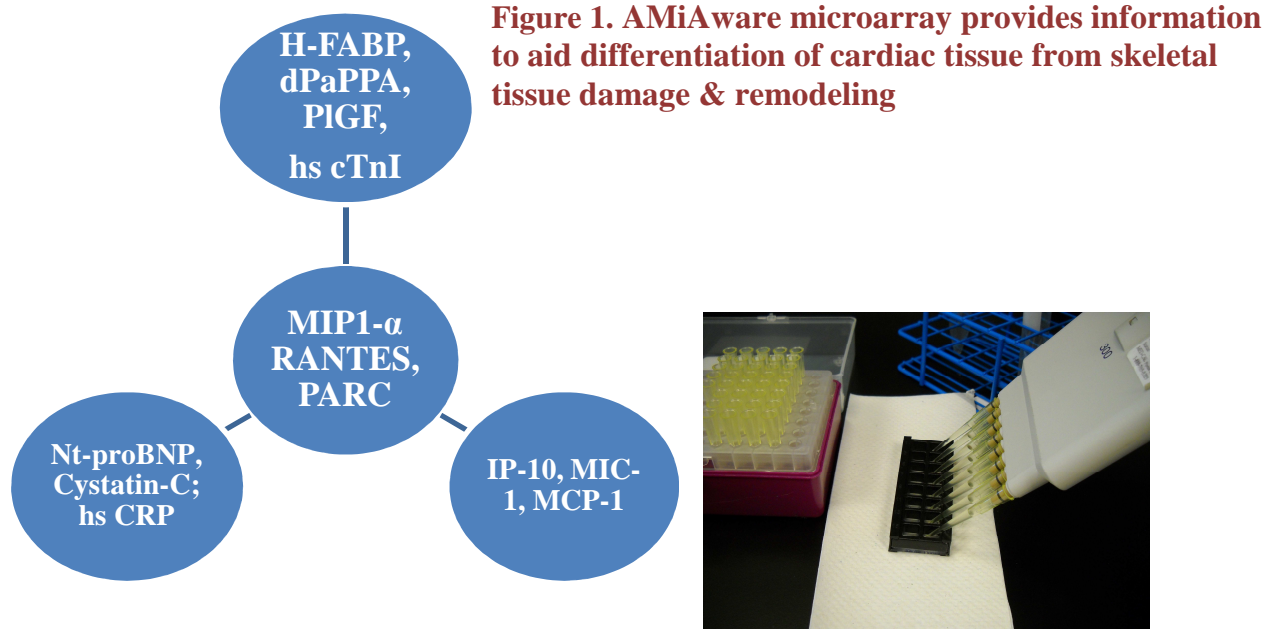
Cardiac tissue damage after an acute myocardial infarction (AMI) can be monitored with proteins reported by AMiAware.⁵ This proprietary multiplex panel delivers key information to aid understanding processes that may lead to heart tissue damage, aiding future therapeutic interventions and preventive care.

XCellCure, LLC AMiAware has Application to Monitor the Healing Process of Tissue

Heart failure is positive for dead or dying cardiac myocytes. AMiAware microarray includes protein markers whose levels in human serum of patients presenting with an acute or chronic wound may lend information to recognize the damaged tissue's potential for healing; supporting selection of tissue regeneration treatment protocols.

**Appropriate for use in Studies Measuring: Cardiac Disease pre and post AMI -
Monitor Patients with Cardiac Arrhythmia - Cardiac tissue profile before Chemotherapy
- Effectiveness of Drug Therapy - Inflammatory Syndromes -- Progression of COPD
Selection of Optimal Treatment Protocol for an Acute or Chronic Wound**

Rapid Quantitative Results to Support Clinical Information



AMiAware provides the first focused targeted solution using multiplexed ELISA methodology to gain efficiency and reduce the cost of measuring multiple protein markers. Each marker's detection sensitivity range is consistent with the levels reported in the published literature.

Rapid Quantitative Results to Support Clinical Information

Benefit	Feature	Value
High sensitivity and specificity across a 4 fold dynamic range.	Sandwich ELISA using fluorescent detection.	Reliable results using a wide range of instrumentation.
hsCRP and MIP1-alpha and troponin 10 more results simultaneously.	Wide dynamic range for each individual protein marker of disease.	Reduces costs by 100 fold within clinical trial budget.
Rapid method using plasma or serum in a single dilution.	Assay designed to reliably detect each protein within the clinical range	Timely results within a few hours aiding publication.
Patented peer reviewed prognostic markers of impending cardiovascular events.	Patented microarray reporting MIP-1 alpha, RANTES and PARC <i>for the first time</i> with cTnI aid understanding of events leading to and including an AMI	Prognostic markers provide information of cardiac function when traditional indicators are negative.
Obtain results rapidly, within 3 hours, for 56 patient samples per kit versus 40 patients.	Convenient 96-well style format allows use of common lab equipment and techniques using 50 ul of sample.	Aids efficiency of laboratory personnel.

Protein	Sensitivity Range Lower End
MIP-1 α ⁸	1000 -4.0pg/mL
RANTES ^{1,3,12,13}	200-0.1ng/ml
PARC ^{1,3}	200-0.1ng/ml
H-FABP ¹⁰	100-0.05ng/ml
dPaPPA ⁶	200-0.1ng/ml
hsCRP ^{14,15}	10,000-5ng/ml
cTnI ^{11,17,18}	20,000-10pg/ml
PIGF ⁹	2000-1pg/ml
Nt-proBNP ¹⁶	4000-2pg/ml
IP-10 ^{8,12,13}	1000-0.5pg/ml
MIC-1 ^{19,20,21}	1000-0.5pg/ml
MCP-1 ^{12,13}	1000-0.5pg/ml
Cystatin C ²²	5000-2ng/ml

Multiplex ELISA Array AMiAware Quantitative, Sandwich-based, Antibody MicroArrays

AMiAware is an array-based multiplex ELISA system for simultaneous quantitative measurement of multiple cytokines combining the high specificity and sensitivity of ELISA with the high throughput of the glass chip-based array. With this platform, only 50 μ l of sample is needed for quantification of up to 13 proteins in quadruplicate, making this array *80 times more efficient than traditional ELISA*.

Get 4x the data, plus high throughput

Rapid Quantitative Results to Support Clinical Information

Each 75mm x 25mm glass slide is spotted with 16 identical antibody arrays (also called “subarrays”). Within each subarray, the capture antibodies along with controls are spotted in quadruplicate. The slide comes with a 16-well removable gasket and chamber assembly that allows for simultaneous processing of up to 16 samples per slide. To achieve even higher throughput, 4 slides can be nested into a tray which matches a standard microplate, allowing for automated processing of 64 arrays simultaneously. The latest automated liquid handling work stations can accommodate several trays at once, allowing hundreds of samples to be processed per day.

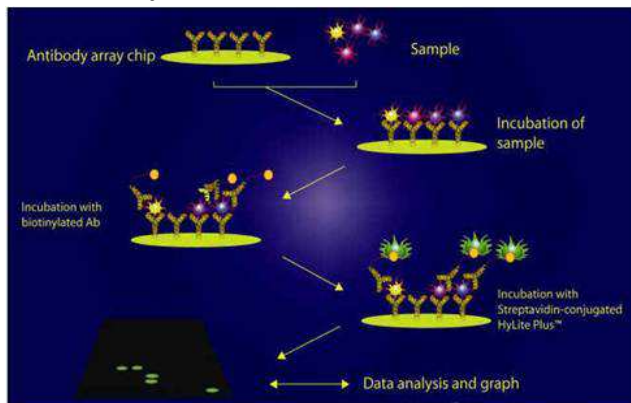
Features

- Less sample, more data: 50 ul of sample for quantification of 13 markers
- 3 hour to results
- More cost-effective than Plate ELISA
- No interference between capture antibodies (unlike bead-based multiplex assays)
- No dedicated equipment required

Contents of kit *

- Chip microarrays
- Sample Diluent
- Lyophilized protein standard mix
- Detection antibody cocktail
- Streptavidin-Fluorescent dye
- Wash buffer
- Manual

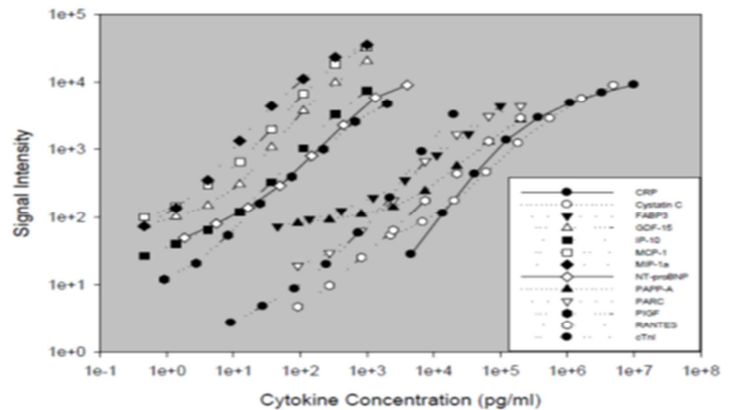
Multiplex Protein Detection with AMiAware Microarray



Like a traditional sandwich-based ELISA, AMiAware uses a matched pair of antibodies for targeted protein detection. A panel of capture antibodies is printed in multiple identical arrays on a standard slide. After a blocking step, samples are incubated with the arrays. Nonspecific proteins are then washed off, and the arrays are incubated with a cocktail of biotinylated detection antibodies, followed by a streptavidin-conjugated fluorophore. Signals are then visualized using a fluorescence laser scanner.

Rapid Quantitative Results to Support Clinical Information

To quantify target protein concentrations, the array-specific protein standards, whose concentrations have been predetermined, are provided to generate an 8-point standard curve of each target protein. By comparing signals from unknown samples to the standard curve, the unknown cytokine concentration in the samples will be determined. For a list of laser scanner specifications, [click here](#). If you do not have access to a scanner, XCellCure provides slide [scanning and data analysis services](#)



Research Applications

- High-throughput profiling of biomarker expression
- Validation of semi-quantitative antibody array results
- Identifying potential molecular targets for drug development
- Identifying the molecular mechanisms of drug action
- Identifying crucial factors involved in disease processes
- Discovering biomarkers for disease management
- Discovering expression patterns for molecular classification of diseases

****Accessories include: 16-well incubation chamber with gasket, protective cover, snap-on sides, adhesive film***

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5. AMiAware™ is a registered trademark of XCellCure. All rights reserved. Some AMiAware components are manufactured by RayBiotech Norcross, GA an ISO13485 facility.
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