

BioArray™ RHCE and RHD BeadChip™

RHCE and RHD Variant Typing by DNA Analysis

The BioArray RHCE and RHD BeadChip assays are high-throughput molecular tests for the detection and identification of RH variants by multiplex DNA analysis.

RHCE Assay Variant Coverage

Crawford; VS; V; (C)ceCF; (C)ceS-1, 2, 3; 16C; ce; Ce; cE; CE; ce variant-1, 2; ceAR; ceAR CF; ceBI; ceEK; ceFV; CeMA; ceMO; ceRA; ceRT; ceS (340)-1, 1.1, 2, 2.1; ceS (697) (ceCF)-1, 1.1, 2, 2.1; ceS (748)-1, 1.1, 2, 2.1; ceS-1, 1.1, 2, 2.1; ceSL; ceTI type 2; ceTI-1, 2; CeVA; CeVG; CW-1, 2; CX-1, 2; DHAR-1, 2; E type I, III (EFM), IV; EK; rN



RHD Assay Variant Coverage

Weak D type: 1, 1.1, 2, 3, 4.0, 4.1, 4.2/DAR, 4.3, 5, 11, 14, 15, 17, 25, 29, 34, 40, 47, 51

D negative: RHDΨ; W16X; D-CE(3-7)-D; D-CE(4-7)-D; (C)dce^s; D-CE(3-9)-D; CE(1-3)-D(4-10); rG; RHD(Y269X)

D_{el}: 1227 G>A; IVS3+1G>A; M295I

Partial D: DAR/weak D 4.2; DIIIa (DIII type 5), DIII type 4,6; DIIIc; DIVa; DIVa -2; DIV type 3, 4, 5; DIVb; DV type 1,2,3 (DBS-0),4,5 (DHK),6,7,8,9; DVI type 1,2,3,4; DNB; DHMi; DUC-2; DAU 1,2,3,4,5; DBT 1,2; DCS 1, 2; DOL; DOL-3; DFR; DFR -2; DTO; DBS-0,1,2



FEATURES AND BENEFITS

COMPREHENSIVE COVERAGE

- RHD BeadChip: 80+ variant alleles
- RHCE BeadChip: 35+ variant alleles

EFFICIENT PROTOCOL

- Multiplex, simultaneous testing of a broad set of RH targets
- 96 tests complete within 5 hours post-extraction with 1 hour of hands-on time

ACCURATE INTERPRETATION

- Automated acquisition, analysis, interpretation and storing of results
- Proprietary Bayesian algorithm for determining phenotype / RH variant from genotype

SPECIFIC RESULTS

- Genetic information to complement serological investigations
- Complex variant analysis for partial, weak alleles, hybrids and deletions

ASSAY OVERVIEW

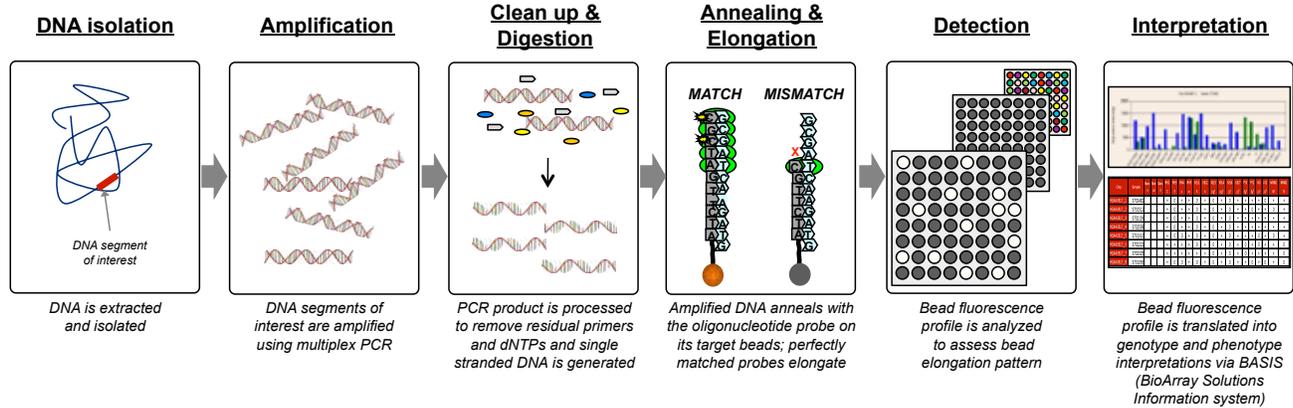
RH is the most complex blood group system, with over 40 antigens encoded by two highly homologous genes: RHCE and RHD. Because of RH's high immunogenicity, this system is critical in blood banking and is associated with transfusion reactions and hemolytic disease of the newborn.

The BioArray RHCE and RHD BeadChips extensively identify RH variants using eMAP technology, providing quick and accurate DNA analysis results to aid in the investigation and management of individuals with variations in RH expression.

Applications of RH variant typing by DNA analysis may include:

- providing prospective determination of RH variants in patients who will be multiply transfused
- identifying clinically significant RH polymorphisms undetectable by current serological techniques
- investigating anomalous or ambiguous serological typings (e.g. unexpected RH antibodies, weak reactions, variations in reactivity across reagents)
- conducting detailed RH variant analysis in pregnant women (e.g. partial D, weak D)
- selectively testing donors/patients for altered or variant expressions of RH

BioArray RH eMAP™ protocol



PRODUCT LINE OVERVIEW

The BioArray product line provides a platform of solutions for molecular immunohematology. Our assays are currently available as Research Use Only (RUO) for a wide range of red blood cell and platelet compatibility cases.

WE KNOW BLOODBANKING

→ BioArray's high throughput BeadChip assays are innovative tools in Transfusion Medicine that enhance donor and patient matching capability and complement our Echo and NEO automated serological testing systems.

WE ARE SETTING THE STANDARD IN MOLECULAR IMMUNOHEMATOLGY

→ With 5 years of development and over 200,000 tests completed, BioArray's core assay, HEA, has been refined and proven at many of the world's leading Centers of Excellence in Transfusion Medicine.

WE ARE FOCUSED ON THE NEEDS OF OUR CUSTOMERS AND THEIR PATIENTS

→ BioArray's BeadChip assays deliver deep insight into antigen typing and provide information needed to aid in the resolution of complex red blood cell and platelet compatibility cases.

RED BLOOD CELL ASSAYS



- **HEA** 38 Human Erythrocyte Antigens and phenotypic variants
- **RHD** RHD variant alleles
- **RHCE** RHCE variant alleles

PLATELET ASSAYS



- **HPA** 22 Human Platelet Antigens
- **HLA-A / HLA-B** Class I Human Leukocyte Antigens

To learn more about extended typing by DNA analysis, contact your sales representative or visit www.immucor.com/bioarray/

BioArray Solutions, Ltd.

35 Technology Drive, Suite 100, Warren NJ 07059
T: 908.226.8200 T: 866.566.8200 F: 908.226.0800
email: CustomerServiceNJ@immucor.com

For Research Use Only.
Not for use in diagnostic procedures.

BASIS, BeadChip, eMAP, AIS are trademarks of BioArray Solutions, Ltd.
©2011 BioArray Solutions, Ltd. All rights reserved.