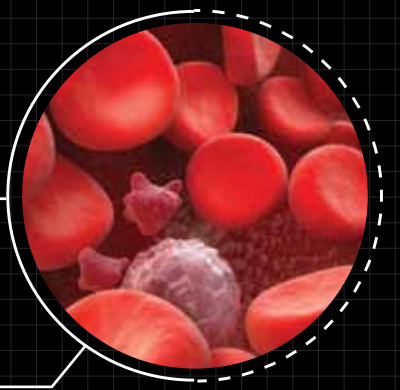
Hemo ID™ Blood Group Genotyping Panel

THE SCIENCE OF PREDICTING PHENOTYPES

Hemo ID™ Blood Group Genotyping Panel

167 alleles
16 blood group systems
6 modules

MassARRAY® System



Open platform

The Hemo ID™ Blood Group Genotyping Panel: DNA-based extended antigen typing of erythrocytes, platelets, and neutrophils.

UNMATCHED DEPTH OF ANALYSIS

Type 101 antigens in 16 blood group systems, and 23 platelet and neutrophil antigens (HPA[1]/HNA). Use the complete Hemo ID Panel for a comprehensive analysis, or select individual Hemo ID Modules for focused analyses.

PRECISION OF MASS SPECTROMETRY

Benefit from the accuracy, precision and throughput of the MassARRAY® System[2,3] – a proven genetic analysis technology referenced in over 2400 scientific publications.

FLEXIBLE THROUGHPUT

Obtain predicted phenotypes from as many as 3000 samples in 6-8 hrs. and reliably identify samples negative for high incidence antigens as well as those positive for low incidence antigens.

COMPREHENSIVE RH GENOTYPING

Analyze complex *RH* genotypes and identify variants with assays for *RHD* zygosity, D_{el}, weak and partial *RHD* alleles, and *RHD-RHCE* hybrid alleles.

AUTOMATED GENOTYPE TO PREDICTED PHENOTYPE CONVERSION

Select from multiple predicted phenotype classification systems, including the latest ISBT[4] designations, and a variety of user-friendly report formats.

AN OPEN GENETIC ANALYSIS PLATFORM

Easily extend the Hemo ID Panel with additional assays for blood group variants prevalent in your research population.

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

Agena Bioscience, Inc. USA
3565 General Atomics Court
San Diego, CA 92121
Phone: +877.4.GENOME
Fax: +1.858.202.9220

Order Desk: +1.858.202.9301
Order Desk Fax: +1.858.202.9220
Order Desk Email:
orderdesk@AgenaBio.com
Web: agenabioscience.com

US: +877.4.GENOME
EU: +49.40.899676.0
AP: +61.7.3088.1600
JP: +81.3.6231.0727
CN: +86.10.8048.0737

51-20004R1.0 1014

Agena BIOSCIENCE

Hemo ID™ Blood Group Genotyping Panel

A panel of SNP and CNV assays for use in genotyping 16 blood group systems and platelet and neutrophil antigens.

MODULE NAME	CAT NO	SAMPLES	PREDICTED PHENOTYPES ASSAYED
Hemo ID™ Blood Group Genotyping Panel	**196002**	**192**	**Includes all six Modules below for a comprehensive analysis**
	196000	**768**	
Hemo ID Kell, Kidd, Duffy Module	**196012**	**192**	**Kell:** K/k, K_{mod} (2 variants), Kp^a/Kp^b, Js^a/Js^b, KEL11/KEL17, K_{null} or K_0 (7 variants) **Kidd:** Jk^a/Jk^b, Jk(a–b–) or Jk_0 (3 variants) **Duffy:** Fy^a/Fy^b, Fy(a–b–) or Fy_0 (GATA), Fy(b+^{w}) or Fyx+
	196010	**768**	
Hemo ID MNS Module	**196022**	**192**	M/N, S/s, Mt^a, Vw, Hut, IVS5 or P2
	196020	**768**	
Hemo ID Rare Blood Groups Module	**196032**	**192**	**Kell:** K/k, Kp^a/Kp^b, Js^a/Js^b, KEL11/KEL17 **Other rare blood groups:** Lu^a/Lu^b, Lu8/Lu14, Au^a/Au^b, Di^a/Di^b, Wr^a/Wr^b, Yt^a/Yt^b, Co^a/Co^b, Kn^a/Kn^b, McC^a/McC^b, Sla/Vil, Do^a/Do^b, Hy, Jo^a, LW^a/LW^b, Sc1/Sc2, Cr^a, $Tc^a/Tc^b/Tc^c$, In^a/In^b, Vel+/Vel–, Vel+^{weak} (Reference 5)
	196030	**768**	
Hemo ID RHD-RHCE Broad Module	**196042**	**192**	**Rhesus status:** DD vs. Dd vs. dd , CC vs. Cc vs. cc, EE vs. Ee vs. ee, *RHCE vs. RHD* exon screening [promoter, intron 1, exon 3, 4, 5, 6, 7 (2x), intron 7, exon 9 (2x), exon 10], RHc at RHCE*201A, RHCw **RHD weak type:** Type 41, Type 66 **RHD category & D– C+:** cat DIII 4, cat DIVa, cat DIVa type, cat III 4-8 or DCes type 1, cat IIIsub or DCes type 1, Dces type 1 & 2 @ RHD-CE*1006T **D–:** RHD(W16X), RHD(Y401X), RHD psi, RHD psi IVS3-19 dupl 37, RHD(IVS3+2T>A)null **RHDel:** RHD(delA147), RHD(IVS3+1G>A)el, RHD(X418L)el **D– (CE):** RHD-CE(2-9)-D+203C, RHD-CE(2-9)-D-2+268A **Other Hybrids:** RHD-CE(1-9)-D, RHD-CE(2-9)-D or RHD-CE(3-9)-D, RHD-CE(2-7)-D or RHD-CE(3-7)-D, RHD-CE(4-7)-D, RHCE-Ce-D(6-10); RHD-D-CE(3)-D, RHD-D-CE(3-5)-D, RHD-D-CE(3-6)-D, RHD-D-CE(4)-D, RHD-D-CE(4-5)-D, RHD-D-CE(4-6)-D, RHD-D-CE(5)-D, RHD-D-CE(5-9)-D, RHD-D-CE(6-9)-D, RHD-D-CE(7)-D, RHD-D-CE(7-9)-D, RHD-D-CE(1048C, 8-9)-D; RHCE-D(1-3)-CE, RHCE-ce-D(4-9)-ce, RHCE-Ce-D(4)-ce, RHCE-Ce-D(4)-ce + 455A, RHCE-CE-D(5)-CE, RHCE-ce-D(5)-ce
	196040	**768**	
Hemo ID RHD Variant Module	**196052**	**192**	**RHD weak type:** Type 1, Type 1.1, Type 2, Type 3, Type 4.0, Type 4.1, Type 4.2 or DAR1, Type 4.3, Type 5, Type 11, Type 15, Type 17, Type 34, Type 47 **RHD category:** cat DIII 6, cat DIII 7, cat DV 5, cat DVI1-DVI4, cat DVII **Other partial RHD:** DAU1-DAU7, DFL, DFR1-DFR4, DHK, DNB, DOL1 or DAK, DOL3, DVL-2 **RHDel:** RHD(K409K)el **Normal RHD:** DAU0 **RHCE variants:** RHCE ce(G385A), RHCE CeMA
	196050	**768**	
Hemo ID HPA/HNA Module	**196062**	**192**	**HNA:** HNA-1a/b/ab/ac/bc /c, HNA-3a/b, HNA-4a/bw, HNA-5a/bw **HPA:** HPA-1a/b, HPA-2a/b, HPA-3a/b, HPA-4a/b, HPA-5a/b, HPA-6a/bw, HPA-15a/b
	196060	**768**	

vA

REFERENCES

1. Technology for platelet polymorphism typing is made available under a license from BloodCenter Research Foundation and BloodCenter of Wisconsin. US Patent Nos. 5,652,357; 5,972,601; 5,780,229; 5,670,337.3.
2. Gassner C, Meyer S, Frey BM, Vollmert C. Matrix-assisted laser desorption/ionisation, time-of-flight mass spectrometry-based blood group genotyping--the alternative approach. *Transfus Med Rev*. 2013;27(1):2-9.
3. Meyer S, Vollmert C, Trost N, Brönnimann C, Gottschalk J, Andreas B, Frey BM, and Gassner C. High-throughput Kell, Kidd, and Duffy matrix-assisted laser desorption/ionization, time-of-flight mass spectrometry–based blood group genotyping of 4000 donors shows close to full concordance with serotyping and detects new alleles. *Transfusion*. 2014 (on-line).
4. International Society of Blood Transfusion. http://www.isbtweb.org/nc/working-parties/red-cell-immunogenetics-and-blood-group-terminology/. Accessed Nov, 14, 2013.
5. Storry JR, Jöud M, Christophersen MK, Thuresson B, et al. Homozygosity for a null allele of SMIM1 defines the Vel-negative blood group phenotype. *Nat Genet*. 2013;45(5):537-541.

Agena BIOSCIENCE