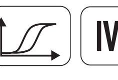

USER MANUAL

REAL-TIME PCR Genotyping Kit

Thrombophilia Susceptibility

REF R1-H901-N3/4EU

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1. INTENDED USE

The *Thrombophilia Susceptibility* **REAL-TIME PCR Genotyping Kit** is intended for research and diagnostic applications. The *Thrombophilia Susceptibility* **REAL-TIME PCR Genotyping Kit** is in vitro Nucleic Acid Test (NAT) – human genotyping-based product. The *Thrombophilia Susceptibility* **REAL-TIME PCR Genotyping Kit** is designed to detect and discriminate eight genetic polymorphisms associated with thrombophilia blood clotting disorders (OMIM #188050; #188055; #227500; #613235; #187800) with an aid of Polymerase Chain Reaction (PCR) method.

There are no contradictions for use the *Thrombophilia Susceptibility* **REAL-TIME PCR Genotyping Kit.**

The *Thrombophilia Susceptibility* **REAL-TIME PCR Genotyping Kit** can be used in clinical and diagnostic laboratories of medical institutions and research practice.

Potential users: personnel qualified in molecular diagnostics methods and working in the clinical and diagnostic laboratory.

It is necessary to apply the kit only as directed in this user manual.

2. METHOD

The implemented PCR method is based on amplification of a target DNA sequence.

The detection is based on melting curve analysis.

The *Thrombophilia Susceptibility* **REAL-TIME PCR Genotyping Kit** employs fluorescent probes each of one specific to one of two alleles of a gene. The PCR-mix contains two distinguishably labelled allele-specific probes bearing reporter fluorescent dyes (Fam and Hex) for each variant of polymorphism. After amplification melting of amplicon-signal probe complexes is performed. It results in changing fluorescence level and is detected by the real-time thermal cycler and is represented by the software as a graph. If the signal probe is partially

complementary to the DNA-target the melting temperature will be less than in case when signal probe is absolute complementary to the DNA-target. The interpretation of results is made based on melting temperatures.

In PCR-mix for each polymorphism the system for human genomic DNA amplification is included. It allows to control quantity of human DNA in amplification tube to exclude mistakes in genotyping.

The system for human genomic DNA amplification includes DNA-probe with fluorescent tag (Cy5) and quencher molecule. While being hybridized to a target sequence, fluorescent probes are inactivated (quenched). When the amplicon is synthesized the probes denaturate and fluorescent tag is no more quenched and therefore provide fluorescent signal. The intensity of fluorescence is measured by Real-time PCR thermal cycler at every step and analyzed with the software provided. The application of three fluorescent dyes makes it possible to determine two alleles and estimate the amount of genomic DNA simultaneously in one tube. Table 1 shows the detection channels of PCR-mix.

Table 1. Detection channels of amplification products

PCR-mix	Fam	Hex	Rox	Cy5	Cy5.5
F2: 20210 G>A	G	A	-	IC	-
F5: 1691 G>A (Arg506Gln)	G	A	-	IC	-
F7: 10976 G>A (Arg353Gln)	G	A	-	IC	-
F13: G>T (Val34Leu)	G	T	-	IC	-
FGB: -455 G>A	G	A	-	IC	-
ITGA2: 807 C>T (Phe224 Phe)	C	T	-	IC	-
ITGB3: 1565 T>C (Leu33Pro)	T	C	-	IC	-
SERPINE1 (PAI-1): -675 5G>4G	5G	4G	-	IC	-

The automatic analysis is available on "DNA-Technology" made instruments: DTlite or DTprime REAL-TIME Thermal Cyclers (see the catalogue at www.dna-technology.ru/en to see available supply options). The current version of the software is available for download at http://www.dna-technology.ru/eng/support/.

3. CONTENT

The *Thrombophilia Susceptibility* REAL-TIME PCR Genotyping Kit content is represented in Table 2.

Table 2. The Thrombophilia Susceptibility REAL-TIME PCR Genotyping Kit content, R1-H901-N3/4EU

Reagent	Description	Total volume	Amount
PCR-mix			
1. F2: 20210 G>A	Colorless transparent liquid	960 µL	1 tube
2. F5: 1691 G>A (Arg506Gln)		960 µL	1 tube
3. F7: 10976 G>A (Arg353Gln)		960 µL	1 tube
4. F13: G>T (Val34Leu)		960 µL	1 tube
5. FGB: -455 G>A		960 µL	1 tube
6. ITGA2: 807 C>T (Phe224Phe)		960 µL	1 tube
7. ITGB3: 1565 T>C (Leu33Pro)		960 µL	1 tube
8. SERPINE1 (PAI-1): -675 5G>4G		960 µL	1 tube
PCR-buffer	Colorless transparent liquid	3.84 mL	1 vial
Taq-AT-polymerase	Colorless transparent liquid	192 µL	1 tube
Mineral oil	Colorless transparent viscous oily liquid	7.68 mL	1 vial

The *Thrombophilia Susceptibility* REAL-TIME PCR Genotyping Kit is designed for 48 tests including the analysis of unknown samples and negative control samples.

4. REAGENTS AND EQUIPMENT REQUIRED BUT NOT PROVIDED

4.1. Specimen collection

Blood sampling equipment is required. Please use only EDTA as an anticoagulant, since other substances can provide PCR inhibition.

4.2. DNA extraction and PCR

Preamplification-specimen and control preparation area

- Biological safety cabinet class II;
- Vortex mixer;
- Refrigerator;
- Nucleic acid extraction kit ("DNA-Technology" made PREP-GS Genetics REF P-023/4EU or PREP-RAPID Genetics REF P-021/4EU are recommended);
- High speed centrifuge (RCF 16000 g);
- Thermostat (temperature range 50-98°C);
- PCR tube rack for 1.5 mL tubes;
- 1.5 mL tubes;
- Physiological saline solution 0.9% NaCl (Sterile);
- Container for used pipette tips;
- Single channel pipettes (volume range 20-200 µL, 200-1000 µL);
- RNase and DNase free filtered pipette tips (volume range 200 µL, 1000 µL);
- Powder-free surgical gloves;
- Disinfectant solution;

Preamplification-reagent preparation area

- UV PCR cabinet;
- Vortex mixer;
- Refrigerator;

- PCR tube rack for 0.2 mL tubes;
- Single channel pipettes (volume range 20-200 µL, 200-1000 µL);
- RNase and DNase free filtered pipette tips (volume range 20 µL, 50 µL, 200 µL, 1000 µL);
- Powder-free surgical gloves;
- 0.2 mL tubes;
- Disinfectant solution;
- Container for used pipette tips;

Post-Amplification – Amplification detection area

- Real-time PCR thermal cycler.

Software:

The most recent version of the DT*prime* and DT*lite* Real-time PCR thermal cyclers software can be downloaded from http://www.dna-technology.ru/eng/support/.

The OS supported: all versions of Windows starting from 7.

5. TRANSPORT AND STORAGE CONDITIONS

Expiry date – 12 months from the date of production.

All components of the *Thrombophilia Susceptibility* **REAL-TIME PCR Genotyping Kit** must be stored at temperatures from 2 °C to 8 °C for the entire shelf-life of the kit. The PCR-mix must be stored at temperatures from 2 °C to 8 °C and out of light for the entire shelf-life of the kit. The excessive temperature and light can be detrimental to product performance. The Taq-AT-polymerase must be stored at temperatures from minus 18 °C to minus 22 °C during the storage period.

The kit can be transported by all types of roofed transport at temperatures from 2 °C to 8 °C over the transportation. It is allowed to transport Taq-AT-polymerase at temperatures from 2 °C to 8 °C for no more than 5 days.

Shelf-life of the kit following the first opening of the primary container:

- components of the kit should be stored at temperatures from 2 °C to 8 °C during the storage period;
- PCR-mix for amplification should be stored at temperatures from 2 °C to 8 °C and out of light during the storage period;
- Taq-AT-polymerase should be stored at temperatures from minus 18 °C to minus 22 °C during the storage period.

An expired *Thrombophilia Susceptibility* **REAL-TIME PCR Genotyping Kit** should not be used.
We strongly recommend to follow the given instructions in order to obtain accurate and reliable results.
The conformity of the *Thrombophilia Susceptibility* **REAL-TIME PCR Genotyping Kit** to the prescribed technical requirements is subject to compliance of storage, transportation and handling conditions recommended by manufacturer.
If you face to any undescribed issues contact our representative in EU or customer service department regarding quality issues with the kit:
Technical support E-mail: hotline@dna-technology.ru, www.dna-technology.ru.

6. WARNINGS AND PRECAUTIONS

Handle and dispose all biological samples, reagents and materials used to carry out the assay as if they were able to transmit infective agents. The samples must be exclusively employed for certain type of analysis. Samples must be handled under a laminar flow hood. Tubes containing different samples must never be opened at the same time. Pipettes used to handle samples must be exclusively employed for this specific purpose. The pipettes must be of the positive dispensation type or be used with aerosol filter tips. The tips employed must besterile, free from the DNases and RNases, free from DNA and RNA. The reagents must be handled under a laminar flow hood. The reagents required for amplification must be prepared in such a way that they can be used in a single session. Pipettes used to handle reagents must be exclusively employed for this specific purpose. The pipettes must be of the positive dispensation type or be used with

aerosol filter tips. The tips employed must be sterile, free from the DNases and RNases, free from DNA and RNA. Avoid direct contact with the biological samples reagents and materials used to carry out the assay. Use powder-free surgical gloves. Avoid producing spills or aerosol. Any material being exposed to biological samples must be treated for at least 30 minutes with disinfecting solution or autoclaved for 1 hour at 121ºC before disposal.

Molecular biology procedures, such as nucleic acids extraction, reverse transcription, amplification and detection require qualified staff to avoid the risk of erroneous results, especially due to the degradation of nucleic acids contained in the samples or sample contamination by amplification products.

All oligonucleotide components are produced by artificial synthesis technology according to internal quality control protocol and do not contain blood or products of blood processing.

Positive control is produced by artificial DNA synthesis technology. Positive control does not include parts of infectious agents.

All the liquid solutions are designed for single use and can not be used more than once in amplification reactions. Plastic tubes do not contain phthalates. Do not breathe gas/fumes/vapor/spray produced by the components of the kit. Do not eat/drink components of the kit. Avoid contact with eyes. Only use the reagents provided in the kit and those recommended by manufacturer. Do not mix reagents from different batches. Do not use reagents from third party manufacturers' kits. All laboratory equipment, including pipettes, test tube racks, laboratory glassware, lab coats, bouffant caps, etc., as well as reagents should be strictly stationary. It is not allowed to move them from one room to another. Equip separate areas for the extraction/preparation of amplification reactions and for the amplification/detection of amplification products. Never introduce an amplification product in the area designed for extraction/preparation of amplification reactions. Wear lab coats, gloves and tools, which are exclusively employed for the extraction/preparation of the amplification reaction and for the amplification/detection of the amplification products. Never transfer lab coats, gloves and tools

from the area designed for amplification/detection of the amplification products to the area designed for extraction/preparation of amplification reactions. Amplification products must be handled in such a way as to reduce dispersion into the environment as much as possible, in order to avoid the possibility of contamination. Pipettes used to handle amplification products must be exclusively employed for this specific purpose. Remove PCR waste only in a closed form. Do not open the tubes after amplification. Waste materials are disposed of in accordance with local and national standards. All surfaces in the laboratory (work tables, test tube racks, equipment, etc.) must be treated daily with disinfecting solution.

Emergency actions

Inhalation: Inhalation of the Master Mix contained within this kit is unlikely, however care should be taken.

Eye Contact: If any component of this kit enters the eyes, wash eyes gently under potable running water for 15 minutes or longer, making sure that the eyelids are held open. If pain or irritation occurs, obtain medical attention.

Skin Contact: If any component of this kit contacts the skin and causes discomfort, remove any contaminated clothing. Wash affected area with plenty of soap and water. If pain or irritation occurs, obtain medical attention.

Ingestion: If any component of this kit is ingested, wash mouth out with water. If irritation or discomfort occurs, obtain medical attention.

Do not use the kit:

- When the transportation and storage conditions are breached;
- When the reagents' appearance does not respond to the kit passport;
- When the kit components packaging is breach;
- After the expiry date provided.

Significant health effects are NOT anticipated from routine use of this kit when adhering to the instructions listed in the current manual.

7. SAMPLES

The *Thrombophilia Susceptibility* **REAL-TIME PCR Genotyping Kit** is designed to detect DNA extracted from the peripheral blood.

Sampling, sample processing procedures and storage are carried out in accordance with the instructions to the DNA extraction kit from biological material.

Peripheral blood sampling is carried out in vacuum plastic tube. It may be 2.0 or 4.0 mL Vacuette blood collection tubes with anticoagulant, for example disodium salt of ethylenediaminetetraacetate (EDTA) at a final concentration of 2.0 mg/mL. After taking the material, it is necessary to mix the blood with anticoagulant turning the tube 2 – 3 times.

It is not allowed to use heparin as an anticoagulant.

Samples may be stored at temperatures from 2 °C to 8 °C for no more than 24 h. When it is impossible to deliver the material in the laboratory during the day, a one-time freezing of the material is allowed. The frozen material is allowed to be stored at a temperature of minus 20 °C for one month.

The detailed description of sampling and sample processing procedures as well as sample storage and transportation requirements cited in PREP-GS Genetics and PREP-RAPID Genetics Extraction Kits user manuals.

8. PROCEDURE

DNA extraction is carried out according to the extraction kit instructions. PREP-GS GENETICS and PREP-RAPID GENETICS Extraction Kits are recommended. The PREP-GS GENETICS Extraction Kit is intended for long-term storage of the extracted DNA (up to 6 months). The DNA extracted with aid of PREP-RAPID GENETICS Extraction Kit should be stored no more than one month.

Independently of DNA extraction kit used, a negative control sample should go through all stages of DNA extraction. Physiological saline solution can be used as a negative control sample in indicated volumes.

The quantity of DNA to be analyzed must be greater than or equal to 1.0 ng per reaction (the Cp parameter for IC must not be more than 32). The violation of this requirement will affect the validity of analysis and void the manufacturer guarantee.

Assay procedure:

1. Mark the required number of 0.2 mL PCR-tubes for each polymorphism to be tested (one tube for each sample to be tested and one extra for negative control “C-”).
   Example: to test 5 samples in one PCR run, mark 40 tubes for samples and 8 tubes for “C-”. The resulting number of tubes is 48.
2. Vortex the tubes with PCR-mixes for 3-5 seconds and spin for 1-3 seconds to collect the drops.
3. Add 20.0 µL of corresponding PCR-mix into the marked tubes (use a new pipette tip for each type of PCR-mix).
4. Vortex the tubes with PCR-buffer and Taq-AT-polymerase for 3-5 seconds, then spin for 1-3 seconds to collect the drops.

Taq-AT-polymerase must be stored at temperatures from minus 18°C to minus 22°C. Room temperature exposure is permitted only for a short time. Remove from freezer just prior to use and place on ice.

5. Prepare the mixture of PCR-buffer and Taq-AT-polymerase. Add into one tube:
   - 10×(N+1) µL of PCR-buffer,
   - 0.5×(N+1) µL of Taq-AT-polymerase,

   N — number of the marked tubes including “C-”.

Example: for simultaneous testing of 5 samples and 1 "C-" in one PCR run, mix 490 µL of PCR-buffer and 24.5 µL of Taq-AT-polymerase (calculate final volume for 49 (48+1) tubes).

6. Vortex the tube for 3-5 seconds, then spin for 1-3 seconds to collect the drops.

The mixture of PCR-buffer and Taq-AT-polymerase must be prepared just prior to use.

7. Add 10 µL of PCR-buffer and Taq-AT-polymerase mixture into each PCR-tube.
8. Add one drop (~20 µL) of mineral oil in each PCR-tube. Close the tubes.

Follow the steps listed in pp 9 - 13 within two hours after addition of PCR-buffer and Taq-AT-polymerase mix to amplification mix.

9. Add 5.0 µL of DNA sample into corresponding PCR-tubes. Open the tube, add DNA sample, then close the tube tightly before proceeding to the next DNA sample to prevent contamination. Use filter tips. Do not add DNA into the "C-" tubes.
10. Add 5.0 µL of negative control ("C-") which passed whole DNA extraction procedure into corresponding tubes. Close the tubes tightly.
11. Spin the tubes for 1–3 seconds to collect the drops.
12. Set the tubes into the Real-time Thermal Cycler.
13. Launch the RealTime_PCR application in "Device operation" mode. Upload the .ini file supplied with the kit before first run. Please refer to DTlite or DTprime thermal cycler's user manual for details on working with .ini files. In subsequent runs add corresponding test to the protocol, specify the number and ID's of the samples, specify the position of the strips in the thermal unit (see p.12) and run PCR.

The type of the negative control tubes must be specified as "Sample".

Selecting a test, Table 3 should be displayed in the "Start run" window.

Table 3. The PCR program for DTlite and DTprime Thermal Cyclers

Step	Temperature, °C	Min.	Sec.	Number of cycles	Optical measurement	Type of the step
1	80	2	00	1		Cycle
	94	5	00			
2	94	0	30	5		Cycle
	67	0	10			
3	94	0	5	45		Cycle
	67	0	5			
4	25	0	30	1		Cycle
5	25	0	15	50	v	Melting, $\triangle t=1°C$; $T_{fin}=75°C$
6	10	...	...	Holding		Holding

9. CONTROLS

The *Thrombophilia Susceptibility* REAL-TIME PCR Genotyping Kit contains amplification system for human genomic DNA intended to sample intake control (IC). IC allows to determine sufficiency of the extracted DNA for analysis. To reveal possible contamination a negative control is required.

A negative control sample should go through all stages of DNA extraction. Physiological saline solution can be used as a negative control sample in volumes indicated in supplied instructions.

The test result is considered valid when genotype is defined.

The test result is considered invalid when the Cp of IC (Cy5) is less than 32 or absent.

If the signal for negative control (C-) is present, all results of current PCR run are considered false. Decontamination is required.

10. DATA ANALYSIS

Registration and interpretation of the PCR results held in automatic mode. The graph will show the fluorescence dependence of the melting temperature for each tube in the thermoblock. The table will show the sample ID, the name of the polymorphism being detected, and the genotyping result of each sample. It is possible to create and print a report based on the analysis results. Please refer to DTlite or DTprime thermal cycler's user manual for details on working with software.

Archive Trombophilia.r96
Mode Preference Help
Protocol Data analysis RealTime_PCR
Protocol: Operator: Date: 14 July 2020, 20:08:56
Comments:
Tests: All Tests
Method: dF/dT Fam
Smooth edges -dF/dT
Temperature, °C
Scale Auto On x=23,5 y=1,011E4 Log_Y Line Marker
Results Statistics Melting Curve IC

N:	Identificator	Test	Polimorphism	
B8	1	F2:_20210_G>A	G	G
C8	1	F5:_1691_G>A	G	G
D8	1	F7:_10976_G>A	G	G
E8	1	F13:_G>T	G	G
F8	1	FGB:_-455_G>A	G	G
G8	1	ITGA2:_807_C>T	T	T
H8	1	ITGB3:_1565_T>C	T	T
A9	1	PAI-1:-675_5G>4G	4G	4G
B11	2	F2:_20210_G>A	G	G
C11	2	F5:_1691_G>A	G	G
D11	2	F7:_10976_G>A	G	G
E11	2	F13:_G>T	G	G
F11	2	FGB:_-455_G>A	G	G
G11	2	ITGA2:_807_C>T	C	C
H11	2	ITGB3:_1565_T>C	T	T
A12	2	PAI-1:-675_5G>4G	4G	4G

View data representation modes

The software registers the result of human genomic DNA amplification (IC) for all samples. For samples containing a sufficient quantity of DNA for correct analysis, the software defines the genotype, which is displayed in the table in the "Polymorphism" column. The samples containing an insufficient quantity of DNA (less than 1.0 ng per reaction or Cp>32) will be analyzed as “invalid” (uncertain result).

Genotyping report

Logotype

Date 14 July 2020, 20:08:56
Number of tube ...
Patient name ...
Sex ...
Age ...
Organization ...
Clinician name ...
CommentsUnique ...

Information about laboratory

Sample ID: 1

№	Name of research	Results
		Genotype
1	F2:_20210_G>A	G G
2	F5:_1691_G>A	G G
3	F7:_10976_G>A	G G
4	F13:_G>T	G G
5	FGB:_-455_G>A	G G
6	ITGA2:_807_C>T	T T
7	ITGB3:_1565_T>C	T T
8	PAI-1:-675_5G>4G	4G 4G

Study was carried out

Date
Signature

In the case of uncertain result, PCR method with the same DNA sample, or DNA extraction and PCR, or blood taking (carry out sequentially) is required to repeat.
In case of positive result in a negative control, the results of the whole tests of current batch are considered to be uncertain. It is necessary to carry out special measures to eliminate contamination.

Table 4. Genotypes and melting temperatures (only for DTlite, DTprime instruments)

Polymorphism	Homozygote Fam/Fam			Homozygote Hex/Hex			Heterozygote		
	Genotype	Fam, °C	Hex, °C	Genotype	Fam, °C	Hex, °C	Genotype	Fam, °C	Hex, °C
F2: 20210 G>A	GG	59,5	47,0	AA	48,0	58,5	GA	57,4	57,7
F5: 1691 G>A (Arg506Gln)	GG	54,4	48,7	AA	39,4	54,4	GA	52,6	52,9
F7: 10976 G>A (Arg353Gln)	GG	52,9	45,7	AA	31,6	52,5	GA	51,5	52,1
F13: G>T (Val34Leu)	GG	59,5	44,0	TT	46,0	57,0	GT	58,0	56,0
FGB: -455 G>A	GG	50,3	43,9	AA	42,9	50,2	GA	49,5	49,7
ITGA2: 807 C>T (Phe224Phe)	CC	52,0	42,0	TT	43,0	52,0	CT	51,0	51,0
ITGB3: 1565 T>C (Leu33Pro)	TT	58, 2	47,2	CC	46,8	55,5	TC	57,0	55,5
SERPINE1:(PAI-1): -675 5G>4G	5G5G	52,1	46,6	4G4G	39,6	54,4	5G4G	50,4	52,5

DNA-Technology Genotyping assays provide genetic information for some, but not all polymorphic loci known to be associated with certain medical conditions. This information estimates a probability of disease development but does not provide a definitive diagnosis, since other genes may contribute to the odds of disease onset. Moreover, the professional medical consultation regarding complex diseases cannot solely rely on genetic testing. The medical recommendations should also consider behavioral, physical, nutritional and familial information of a patient. On the basis of DNA-Technology Genotyping assays, a specialist can

conclude whether a person of a certain genotype has lower or higher chance of disease development in relation to average risk. The definitive diagnosis is a derivative of a physicians experience and the depth of clinical information.

At the assay development stage we review the most up-to-date scientific literature on genetic associations repeatedly confirmed by independent research. We restrict our genotyping assays to a relatively small set of genetic markers because we believe they provide the most helpful and unbiased information about possible genetic susceptibility to common diseases.

11. SPECIFICATIONS

a. The analytical **specificity** of the *Thrombophilia Susceptibility* **REAL-TIME PCR Genotyping Kit** was assessed by bioinformatics analysis using available on-line databases with up-to-date comprehensive genetic information. The specific oligonucleotides used in the test were checked against GenBank database sequences. None of the sequences showed sufficient similarity for unspecific detection.

b. In a determination of analytical **sensitivity,** the *Thrombophilia Susceptibility* **REAL-TIME PCR Genotyping Kit** demonstrated the ability to reproducibly detect 1 or more genome equivalents per PCR reaction.

The lower limit of detection is not less than 1.0 ng of human DNA per amplification tube, which corresponds to Cp≤32.0 on the IC detection channel. When the amount of DNA is smaller (CP>32.0 on the IC detection channel), the manufacturer does not guarantee the correct result of the kit.

After the amplification reaction for samples with insufficient quantity of DNA (less than 1.0 ng per amplification tube), the result is defined as unreliable.

The claimed specifications are guaranteed when DNA extraction is performed with PREP-GS Genetics REF P-023/4EU or PREP-RAPID Genetics REF P-021/4EU kits.

12. TROUBLESHOOTING

Table 5. Troubleshooting

	Result	Possible cause	Solution
C-	+	Contamination	Dispose current batch Perform decontamination procedures
IC	Invalid	PCR inhibition Insufficient amount of DNA	Repeat whole test Resample

If you face to any undescribed issues contact our customer service department regarding quality issues with the kit:

Technical support E-mail: hotline@dna-technology.ru,
www.dna-technology.ru.

13. QUALITY CONTROL

"DNA-Technology Research&Production", LLC declares that the above mentioned products meet the provision of the Council Directive 98/79/EC for *In vitro* Diagnostic Medical Devices. The quality control procedures performed in accordance with ISO ISO 9001:2015 and ISO 13485:2016:

- observation of quality management in manufacturing of IVDD products;
- creation of values for customers;
- maintenance of the best service quality and customer management.

Contact our customer service with quality issues of *Thrombophilia Susceptibility* REAL-TIME PCR Genotyping Kit:
Technical support E-mail: hotline@dna-technology.ru

Manufacturer: "DNA-Technology, Research & Production" LLC
Russia, 142281, Moscow Region,
Protvino, 20 Zheleznodorozhnaya Street,
Phone/fax: +7(495) 640.17.71
E-mail: info@dna-technology.com
http://www.dna-technology.ru

Authorized representative in EU:
OBELIS S.A
Registered Address:
Bd. Général Wahis, 53
1030 Brussels,
Belgium
Tel: +32.2.732.59.54
Fax: +32.2.732.60.03
E-mail: mail@obelis.net
http://www.obelis.net

14. KEY TO SYMBOLS

Symbol	Meaning	Symbol	Meaning
IVD	In vitro diagnostic medical device		Date of manufacture
	Temperature limitation		Consult instructions for use
	Sufficient for	REF	Catalogue number
	Use by		Manufacturer
LOT	Batch code		Keep away from sunlight
	Caution	VER	Version
EC REP	Authorized representative in the European Community		Do not reuse
NON STERILE	Non-sterile		

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