



ANCESTRY REPORT

CLIENT ID: GSA0002
NAME: SAMPLE REPORT MALE

TABLE OF CONTENTS

	Page
Understanding Your Results	2
Frequently Asked Questions	3
Your Results Ancestral Contributions	5
Your Results Map	6
Your Results Regions	7
Your Results Maternal Lineage	10
Your Results Paternal Lineage	12
Your Results Top 10 GEDMatch matches	14
Raw Data Usage	16
Genomics Glossary	17
Disclaimer	18

HERE'S A FUN FACT!



If you unravelled all DNA in your body and put it end to end, it would go from the earth to the sun and back hundreds of times!

UNDERSTANDING YOUR RESULTS

INTRODUCTION

The Mediclinic Precise ancestry test investigates and analyses hundreds of thousands of sites in your DNA and compares it to the DNA of other populations around the world. Our computer software has the ability to determine **how similar you are compared to these populations when looking across all 23 pairs of your chromosomes**. Based on these scientific calculations, we can estimate your ancestral contributions based on chromosomes 1 - 22 and your maternal and paternal lineages via mitochondrial DNA (mtDNA) and the Y chromosome, respectively.

READING YOUR RESULTS

Your results are separated into **three different sections**. The first section (a table and a pie chart) depicts your **overall ancestral contributions per region**, which is provided as a percentage of your total ancestry. The second section goes into depth for each region, providing some **fascinating facts regarding the countries in this region**. The last section depicts your **maternal and paternal (only in the case of males) lineages**, which is based off your mitochondrial DNA and Y chromosome, respectively. Each region is given a specific colour, which is consistent with the colour for the specific ancestral contribution they represent across your report.



A basic illustrative key to compare the matched traits of YOUR 23 pairs chromosomes to those of other populations in a database

e.g. HAIR COLOUR
BODY SHAPE
SKIN COLOUR

FREQUENTLY ASKED QUESTIONS

Why do my results look different from other company's ancestry tests that I have done before?



Every company's ancestry test differs in either how your genetic data is analysed using computational algorithms, or the population data that your genetic data is directly compared to. One company might use population 'A' to represent East Africa, but another uses population 'B', which might vary enough to affect your results.

Why don't we provide country level results, but rather regional level results?



Overall, most companies offer regional results as providing country level results will only be accurate when including genetic data from every population within that specific region. Therefore, an individual's report suggesting that they have 10% Kenyan ancestry, upon further investigation, may show that it was the only East African population used for the analysis and the ancestral contribution actually originates from a population in Tanzania.

Why do my results look different to my genealogy test results?



Ancestry and genealogy tests are very different in the overall results they produce. An ancestry test looks at patterns in your DNA to tell us about the origins of your genetic data. A genealogy test uses historical records, in some cases oral history, to draft a family tree showing how individuals are connected and where they lived/were born.

Why are my results different to those of my family members?



Parents contribute 50% of their DNA to their children and the combination of the 50% may vary for each child resulting in different results. If you have an ancestral contribution that is absent in your parents, it may be indicative of two things. Firstly, your parents may have the ancestral contribution, however, it is less than 1% and we therefore don't report on it. Secondly, the ancestry has been "absorbed" by another ancestral contribution, e.g. your mother's North European contribution may be assigned as Western European in you as these two populations are similar and may share ancestry informative markers.



FREQUENTLY ASKED QUESTIONS | Cont'd

How accurate are my Mediclinic Precise Ancestry Test results?



As with most statistical calculations, these are estimated values associated with some degree of error, however, we have minimised this as much as possible to provide the most accurate results (overall accuracy of 92%).

Will my Mediclinic Precise Ancestry Test results change and why?



As specific populations in the database increase in size, we may have an updated reference dataset that your DNA sample is compared to. Your results may change slightly, however, the overall continental ancestry ratio should remain largely the same, e.g. if you are 80% African, you will not present as 80% European with a reanalysis. We may also add new regions to the report, which could change your results if a contribution from the new ancestral region is present.

Why do females not receive paternal lineage results?



Most humans have 23 pairs of chromosomes in every cell of their body. One pair of these chromosomes are called the “sex” chromosomes determining whether you are biologically a male or female. Females have two X chromosomes i.e. XX, while males have one X and one Y chromosome i.e. XY. Currently, the paternal lineage can only be determined using the Y chromosome.

Why do my maternal and/or paternal lineages not correlate with my overall ancestral contributions?

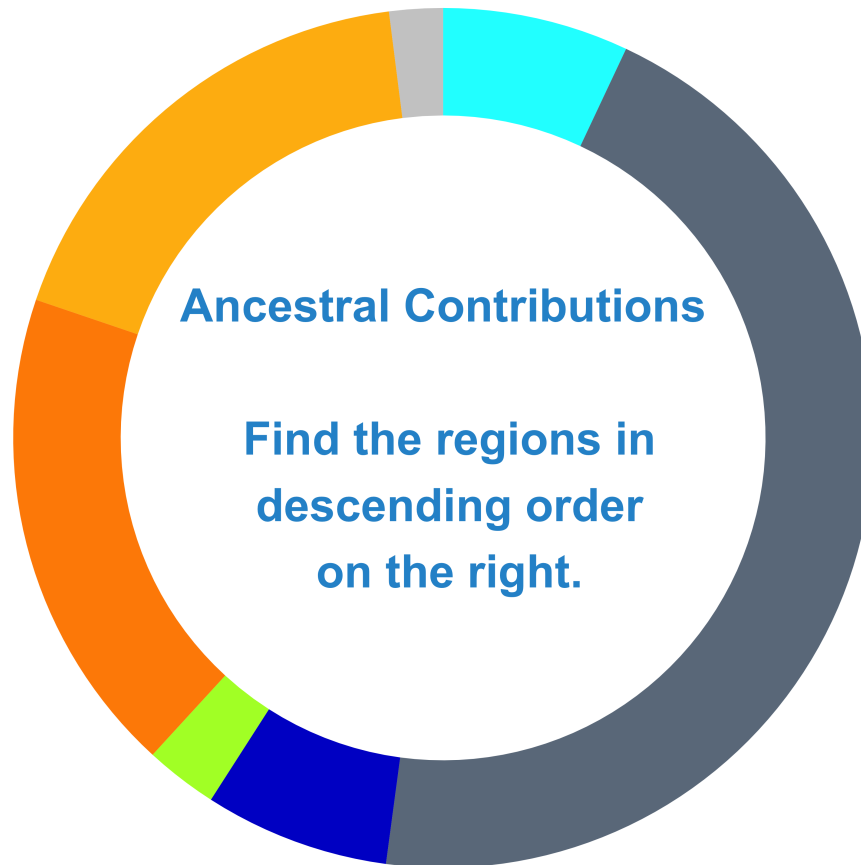


The Mediclinic Precise ancestry test looks at different parts of your genome, which carries specific information about your genetic history. The maternal lineage looks at mitochondrial DNA, which is passed down from mother to child, whilst the paternal lineage looks at the Y chromosome passed down from father to son. The overall ancestral contributions represent genetic information contained in chromosomes 1-22. Both the maternal and paternal lineages are able to trace your origins back 1000's of years (in most cases), whereas the ancestral contributions provide you with both older and more recent origins.



YOUR RESULTS | Ancestral Contributions

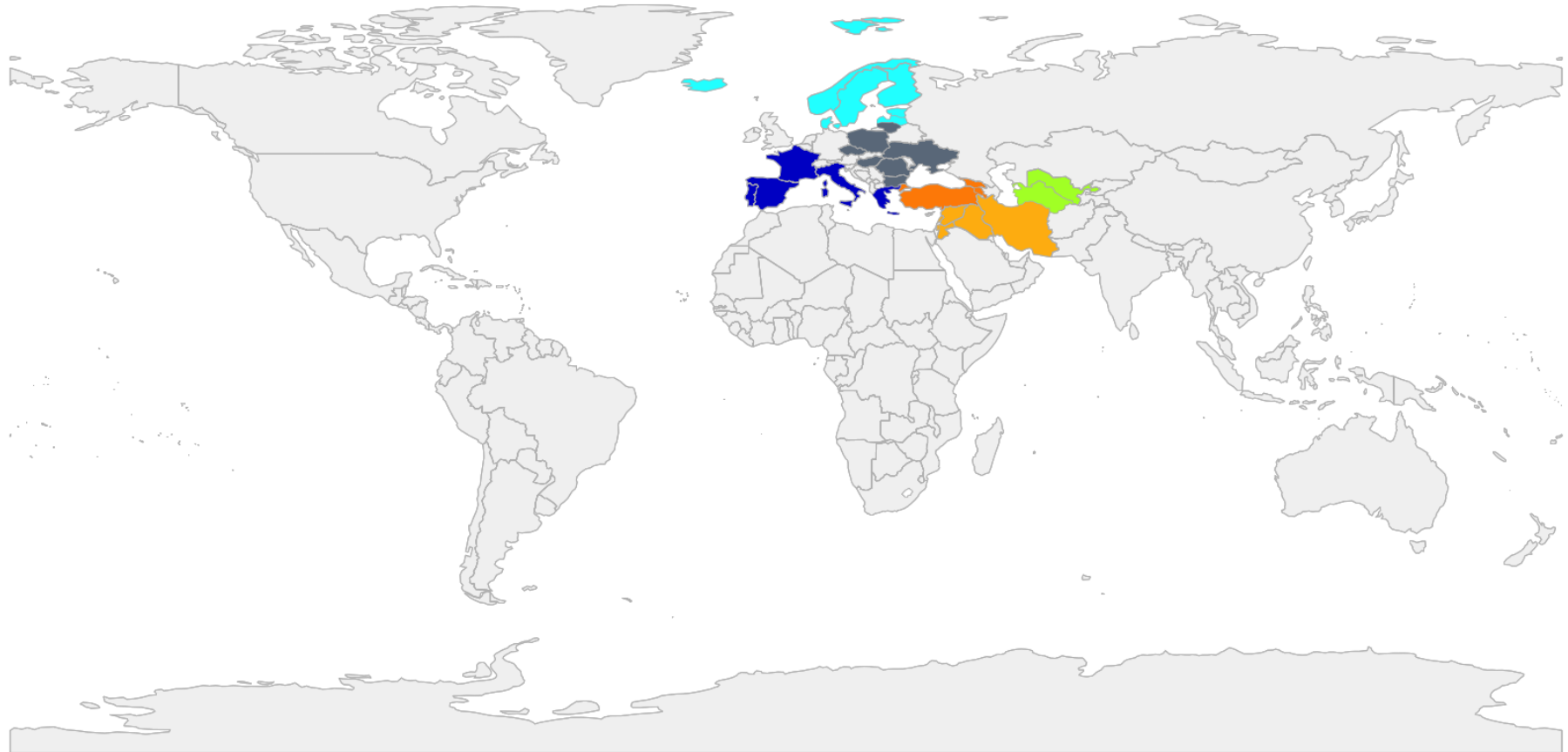
We traced your genetic history back to:



Region	Colour	Percentage
Eastern Europe	Dark Grey	44.82
Western Asia	Orange	18.27
Middle East	Yellow-Orange	17.66
Northern Europe	Cyan	6.95
Southern Europe	Blue	6.91
Central Asia	Light Green	2.71
Ancient	Light Grey	2.00
Western and Central Europe	Blue-Black	0.00
Northern Eurasia	Dark Green	0.00
Eastern Asia	Bright Green	0.00
Southern Asia	Brown	0.00
South Eastern Asia	Olive Green	0.00
Ashkenazi Jew	Red	0.00
Arabian Peninsula	Tan	0.00
Northern Africa	Magenta	0.00
Eastern Africa	Dark Purple	0.00
Southern Africa - KhoeSan	Light Purple	0.00
Southern Africa - Bantu-Speaking	Dark Purple	0.00
Central Africa	Light Purple	0.00
Western Africa	Pink	0.00
Southern America	Dark Red	0.00
Latin America	Light Red	0.00
Oceania	Teal	0.00

YOUR RESULTS | Map

Find your ancestral contributions on the map!









"The ancestry of human beings is rich and varied. If we look far enough into the past it connects us all."









YOUR RESULTS | Regions


Lets take a closer look at the specific regions:

REGION	MAP	DESCRIPTION
 <p>EASTERN EUROPE Czech Republic, Croatia, Hungary, Bulgaria, Ukraine, Poland, Slovakia, Romania, Lithuania, Belarus, Mordovia</p>		<p>The eastern region of Europe borders on to western Asia and is considered the most diverse region in Europe; multiple cultures and religions are present in this area. A large part of Eastern Europe was affected by World War I and II as well as the breakup of the Soviet Union. This caused population movement within the area. In Bulgaria, shaking you head means that you are expressing your approval and/or consent and just remember that clinking glasses is a big faux pas. Bulgaria was home to the well known gladiator, Spartacus. Romania was the first country to get street lights in Europe and was part of a number of Eastern European countries to invent the CD-ROM.</p>
 <p>WESTERN ASIA Turkey, Armenia, Georgia</p>		<p>West Asia (as with most of Asia), was the middle stop along various trade routes, largely due to its close proximity with Europe. During the 16th and 17th centuries, the Ottoman Empire ruled western Asia, southeast Europe as well as Northern Africa. The Ottoman Empire ruled these regions until the 19th century when support of the ruling structure declined. The cultural setting in this region is a clear amalgamation of European traditions with Asian flair and proves to be one of the most diverse regions in Eurasia. The city of Istanbul in Turkey is the only city to lie on two continents, Asia and Europe.</p>
 <p>MIDDLE EAST Syria, Lebanon, Palestine, Iraq, Jordan, Iran</p>		<p>The Middle East was the home of some of the earliest civilizations including Mesopotamia and ancient Egypt. The area is well known for its reserves of oil and natural gas. Most of the Middle East is mainly desert but the Nile and the Tigris rivers run through Egypt and Iraq respectively. In addition, there is a volcanic field in the northwest that extends into Syria and Jordan.</p>

YOUR RESULTS | Regions cont'd

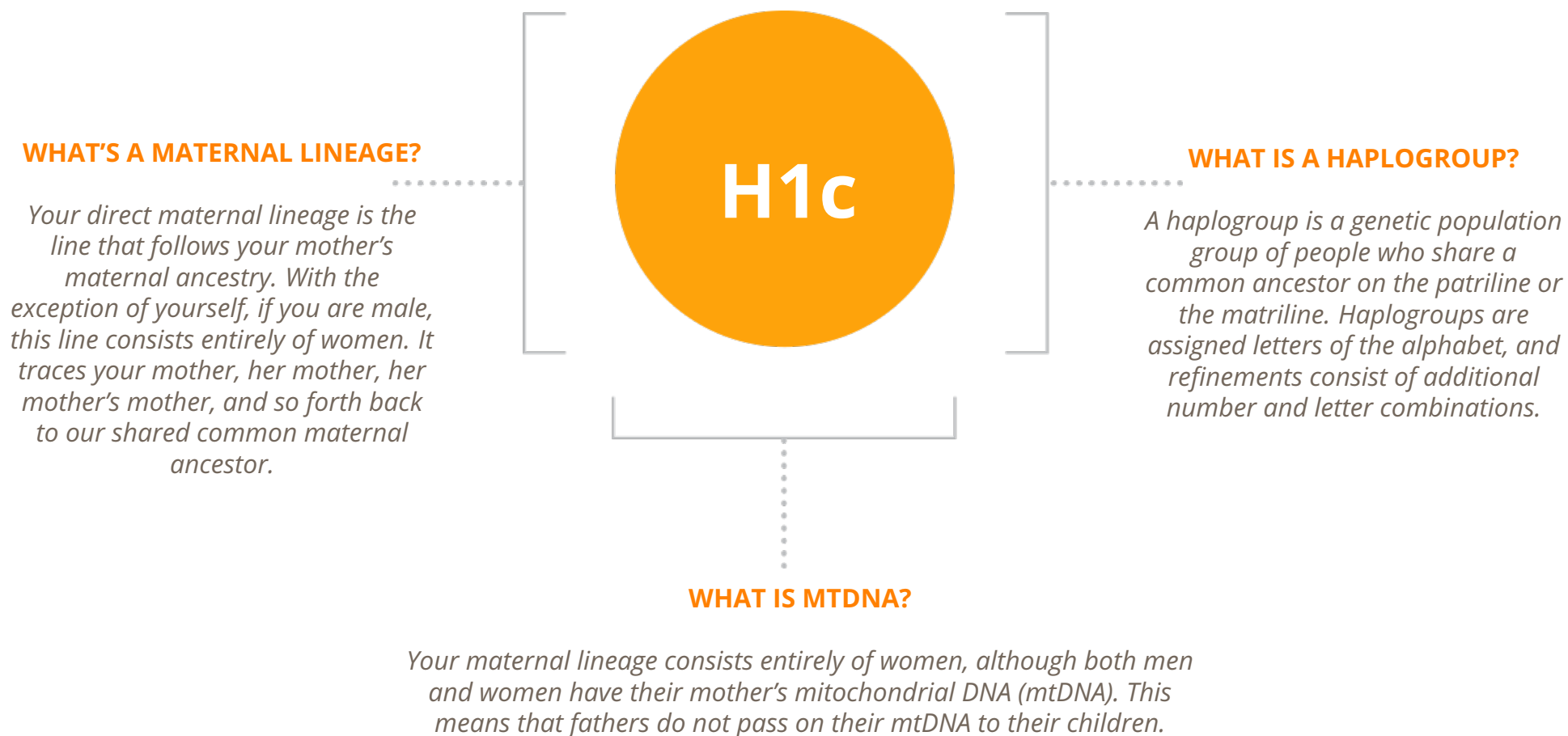
REGION	MAP	DESCRIPTION
 <p>NORTHERN EUROPE Norway, Sweden, Finland, Denmark, Iceland, Estonia, Latvia</p>		<p>Northern Europe has an interesting history rooted in the Scandinavian Vikings who ruled the area 1300 to 800 years ago. Most of modern-day Europeans living in this area today have genetic links to these ancestors. Norway has the largest population of Arctic reindeer herders and there is a long history between this animal and the people of Norway going back several thousand years. Finland has been called The Land of the 1000 lakes and is well known for its picturesque landscapes. A flag is flown outside your house in Denmark when it is your birthday and if a man is not married by the age of 30, they will get a pepper shaker as a gift and forever be called a Pepperman (or pebersvend).</p>
 <p>SOUTHERN EUROPE Italy, Spain, Greece, Portugal, France</p>		<p>The southern region of Europe borders and spans the Mediterranean Sea encompassing Spain, Italy, Greece, Portugal and southern France. Southern Europe is a mecca for food, wine and beautiful scenery. No wonder the Greek Gods called it home! The Roman Empire ruled the area for centuries and were responsible for the colonisation of various countries, including those in North Africa. Due to this and its proximity to North Africa, many southern Europeans have some North African ancestry. Southern Europe houses the smallest country in the world, Vatican City. The southernmost point in mainland Europe is in Spain.</p>
 <p>CENTRAL ASIA Uzbekistan, Turkmenistan</p>		<p>Central Asia was dominated by the ancient Persian Empire and this region was once part of the Soviet Union. Uzbekistan was conquered by Alexander the Great and the thirteenth century brought about the rule of Ghengis Khan and the Mongols who ruled the region for hundreds of years. The capital city of Turkmenistan, Ashgabat, holds a Guinness World Record for having the most number of white marble buildings.</p>

YOUR RESULTS | Regions cont'd

REGION	MAP	DESCRIPTION
 ANCIENT Neanderthal, Denisovan		<p>Neanderthals and Denisovans are an extinct sub-species of ancient humans who lived across Europe and Asia, respectively. Neanderthals lived up until approximately 40 000 years ago, while Denisovans lived up until approximately 30 000 years ago. Modern humans, especially those originating in Eurasia, can contain as much as 4% Neanderthal DNA and 6% Denisovan DNA.</p>

YOUR RESULTS | Maternal Lineage

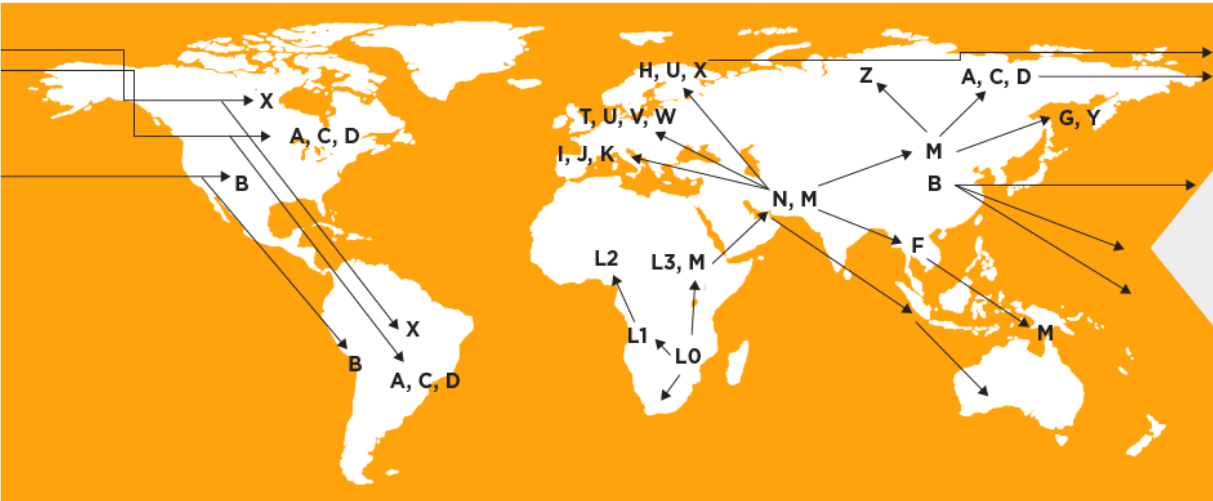
We traced your maternal lineage back thousands of years based on your mitochondrial DNA (mtDNA). Your mtDNA haplogroup is:



YOUR RESULTS | Maternal Lineage cont'd

H1c

The time of origin of the H1 haplogroup is between 9 000 to 10 800 years ago. The H1 haplogroup represents the most common H subgroup in Europe, and more than half of the H haplogroups are found in Western Europe. High frequencies for the H1 haplogroup are also observed in Northern Africa, the Iberian peninsula, South West France and Sardinia. Prince Philip, Duke of Edinburgh, shares the H haplogroup with you.



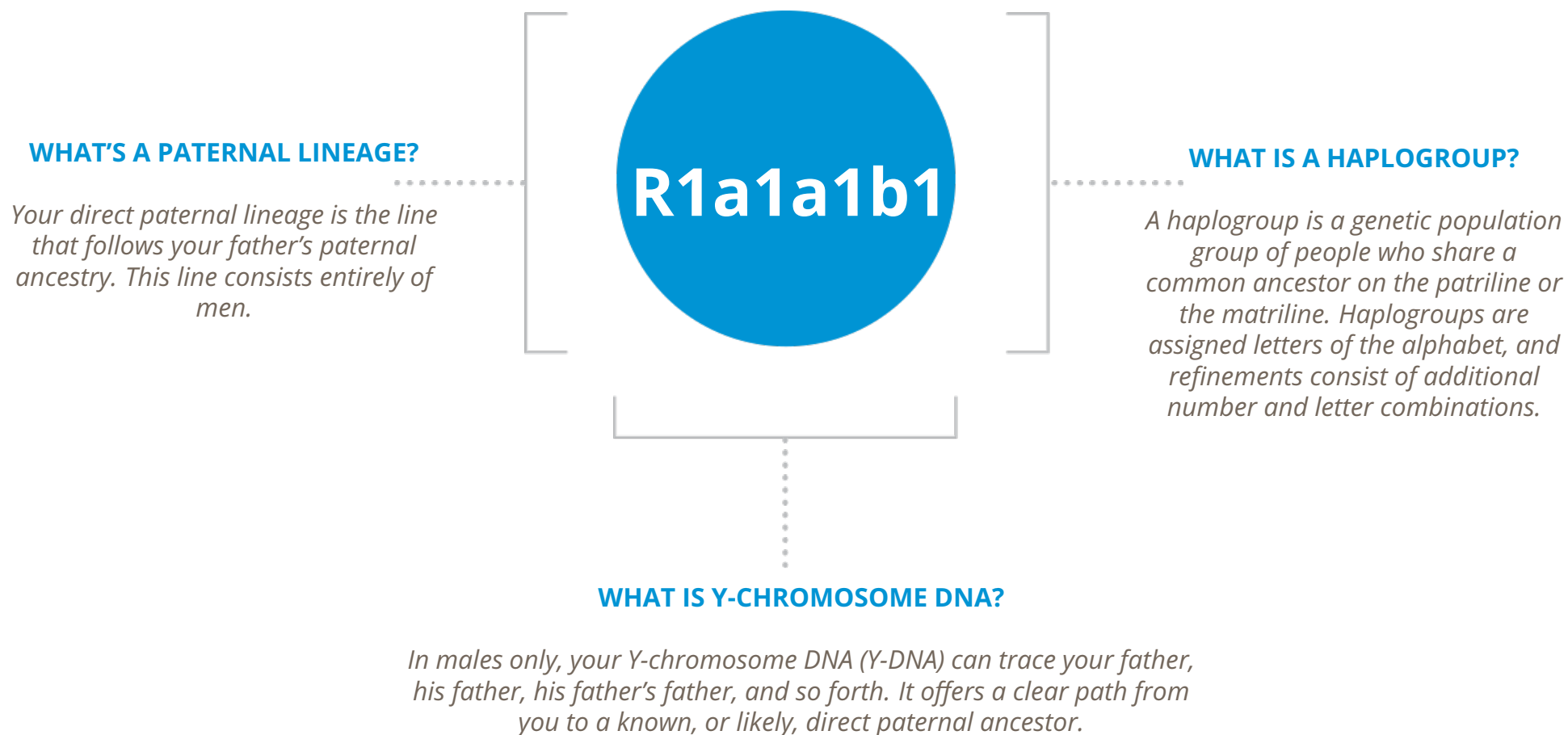
This map shows the connection between every mtDNA haplogroup.

? Can you find your major mtDNA haplogroup?



YOUR RESULTS | Paternal Lineage

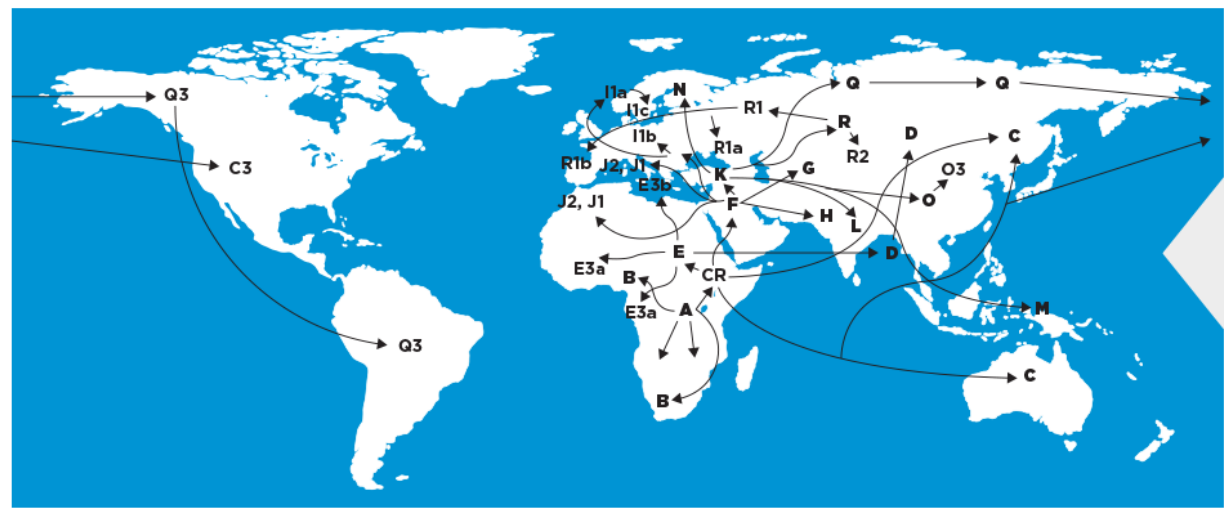
We traced your paternal lineage back thousands of years based on your Y-chromosome. Your Y-chromosome haplogroup is:



YOUR RESULTS | Paternal Lineage cont'd

R1a1a1b1

The time of origin of the R1a haplogroup is between 22 000 to 25 000 years ago. Haplogroup R1a is distributed largely throughout Eurasia, ranging from Scandinavia and Central Europe to Southern Siberia and Southern Asia. Tom Hanks, an American actor and filmmaker, shares the R1a haplogroup with you.



This map shows the connection between every Y-chromosome haplogroup.

? Can you find your major Y-chromosome haplogroup?



YOUR RESULTS | Top 10 GEDmatch matches

PrimaryKit	PrimaryName	PrimaryEmail	MatchedKit	MatchedName	MatchedEmail	LargestSeg	TotalcM	Overlap	Gen	LargestXSeg	Total XCM	CreatedDate	TestCompany
LB1234567	Sample Report Male	ancestry.info@mediclinic.co.za	RJ1234567	*Match Name Alias	MatchedPerson@email.com	110.004	2007.586	436817	1.400	23.899	71.900	2022-10-08	MyHeritage
LB1234567	Sample Report Male	ancestry.info@mediclinic.co.za	RX1234567	Match Name	MatchedPerson@email.com	46.061	223.404	432170	3.000	0.000	0.000	2021-12-28	FTDNA
LB1234567	Sample Report Male	ancestry.info@mediclinic.co.za	RL1234567	Match Name	MatchedPerson@email.com	37.960	130.736	472866	3.400	0.000	0.000	2018-05-01	23andMe
LB1234567	Sample Report Male	ancestry.info@mediclinic.co.za	M1234567	Match Name	MatchedPerson@email.com	37.909	124.610	173132	3.400	0.000	0.000	2018-05-01	Migration - V3 - M
LB1234567	Sample Report Male	ancestry.info@mediclinic.co.za	TV12345674	*Match Name Alias	MatchedPerson@email.com	43.257	110.736	437021	3.500	0.000	0.000	2021-09-30	MyHeritage
LB1234567	Sample Report Male	ancestry.info@mediclinic.co.za	AM1234567	Match Name	MatchedPerson@email.com	32.157	107.752	432476	3.500	0.000	0.000	2022-09-15	FTDNA
LB1234567	Sample Report Male	ancestry.info@mediclinic.co.za	QC1234567	Match Name	MatchedPerson@email.com	28.195	107.134	476841	3.500	0.000	0.000	2022-12-27	23andMe
LB1234567	Sample Report Male	ancestry.info@mediclinic.co.za	EA1234567	Match Name	MatchedPerson@email.com	22.775	108.737	436720	3.500	0.000	0.000	2021-06-11	MyHeritage
LB1234567	Sample Report Male	ancestry.info@mediclinic.co.za	WE1234567	Match Name	MatchedPerson@email.com	26.058	107.661	165884	3.500	0.000	0.000	2020-12-31	Ancestry
LB1234567	Sample Report Male	ancestry.info@mediclinic.co.za	BB1234567	*Match Name Alias	MatchedPerson@email.com	33.334	107.053	436286	3.500	18.950	18.950	2020-05-16	MyHeritage

GEDmatch Terminology

'PrimaryKit': The unique GEDmatch specific ID that is given to each individual when uploading their genetic data. **'PrimaryName':** Your name or preferred alias. **'PrimaryEmail':** This is the email address that is associated with the PrimaryKit. **'MatchedKit':** The kit number of the matched individual. **'MatchedName':** The name of the individual that GEDmatch is comparing your data to and have found a top 10 match with. Individuals with an asterisk (*) indicate that they have used an alias and therefore the specific name might be a nickname or pseudonym. **'MatchedEmail':** This is the contact email for the specific individual that you have matched to. It may be that someone else (a family member, friend or a commercial company) have uploaded the individual's data. **'LargestSeg':** This column indicates the largest length of your DNA that matches that individual's DNA. **'TotalcM':** This column indicates the length of all parts of your DNA that matches that individual's DNA. cM is an abbreviation for centimorgan, which is a measure of genetic distance/length. **'Overlap':** This column indicates the total number of DNA markers that overlap between you and that individual. Matches with low overlap are highlighted in red. **'Gen':** Degree of relatedness. Based on the 'LargestSeg', the 'TotalcM' and the 'Overlap' columns, GEDmatch estimates the number of generations back that you and a specific individual are related. **'LargestXSeg':** The largest DNA segment on the X chromosome that matches. **'Total XCM':** The total length of DNA (in cM) on the X chromosome that matches. **'CreatedDate':** The date the matched kit was uploaded to GEDmatch. **'TestCompany':** The ancestry testing company that generated the genetic data for the matched kit.



YOUR RESULTS | Matches cont'd, 'Gen' descriptions

Generations	Relationship
1.0	Parent-Child
1.2	Siblings
1.4	Half-sibling Uncle-Niece Grandparent
1.5	Uncle-Niece
1.6	Uncle/Aunt - Niece/Nephew
1.9	First Cousins
2.3	First Cousins
2.2 - 2.5	First Cousins Once Removed
2.6 - 3.0	Second Cousins
3.3 - 3.7	Second Cousins Once Removed
3.5	Second Cousins Twice Removed

Generations	Relationship
3.5 - 4.0	Third Cousins
3.8 - 3.9	Third Cousins Once Removed
4.1	Second Cousins Once Removed Second Cousins Twice Removed Second Cousins Three Times Removed Third Cousins Once Removed
4.2	Second Cousins Once Removed
4.3	Third Cousins
4.4	Second Cousins Twice Removed Third Cousins Third Cousins Once Removed Third Cousins Twice Removed Fourth Cousins Fourth Cousins Once Removed



RAW DATA USAGE

Did you know that you can request your raw genetic data?

With this data, you can use other online services to:



Learn more information about your unique dietary



Find long lost relatives and build a family tree



Gain more insight into specific health factors



Contact us to request your data:
ancestry.Info@mediclinic.co.za

GENOMICS GLOSSARY

Array: A technology used to study many genes and DNA variants at once. Also known as a chip.

Autosome: One of the numbered, or non-sex, chromosomes (1 through 22).

Base: A single unit of a DNA strand. Also known as a nucleotide. Bases come in 4 versions: adenine, cytosine, guanine, thymine.

Chromosome: An organized package of DNA found in the nucleus of the cell. Humans have 23 pairs of chromosomes: 22 pairs of numbered chromosomes (autosomes) and 1 pair of sex chromosomes, X and Y.

Deoxyribonucleic acid (DNA): Carries genetic instructions in all living things. DNA consists of 2 strands that wind around one another to form a shape known as a double helix. Each strand has a backbone made of alternating sugar (deoxyribose) and phosphate groups, in addition to 1 of the 4 bases (see above). The 2 strands are held together by strong hydrogen bonds.

DNA variant: A site in the DNA sequence where there is a change in the order of the bases. Also known as a polymorphism when it occurs frequently in specific populations.

Gene: The unit of heredity which is transferred from a parent to their children. It forms a sequence/-collection of bases that eventually codes for the production of a protein that performs a specific function in the body.

Genome: The entire set of genetic instructions, encoded in DNA, found in a cell. Genomics is the study of the functions and interactions of many genes in the genome.

Genotype: The set of 2 bases inherited for a particular DNA variant. "To genotype" means to determine the type of bases present at a specific site.

Mitochondrial DNA: A small DNA sequence that is found in mitochondria of most cells. This DNA is different to other nuclear DNA as it is passed only from a mother to their child.

Sex chromosome: These 2 chromosomes (X or Y) determine an individual's biological gender; XX for females XY for males.



DISCLAIMER



**THANK YOU FOR CHOOSING MEDICLINIC
PRECISE TO TAKE THIS JOURNEY WITH YOU.**

Your ancestry test results are as scientifically accurate as possible, however, it cannot be interpreted as being 100% factual. For this reason, your ancestry test results cannot be used in any legal proceedings.

FOR MORE INFORMATION:



0861 444 558



ancestry.info@mediclinic.co.za



www.mediclinic.co.za/precise

"The ancestry of human beings is rich and varied. If we look far enough into the past it connects us all."

