



# ANCESTRY REPORT

**CLIENT ID:** GSA0001  
**NAME:** SAMPLE REPORT FEMALE

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## 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!

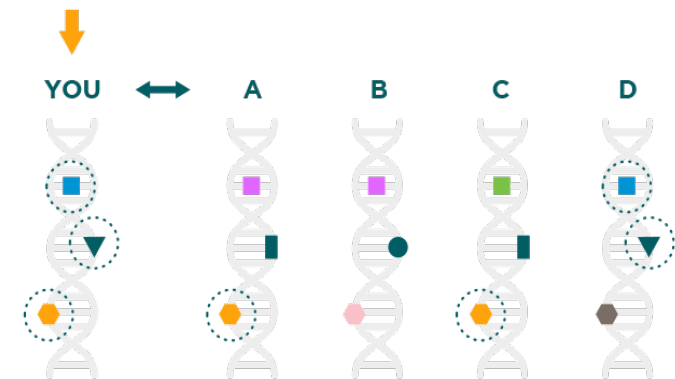
# UNDERSTANDING YOUR RESULTS

## 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?

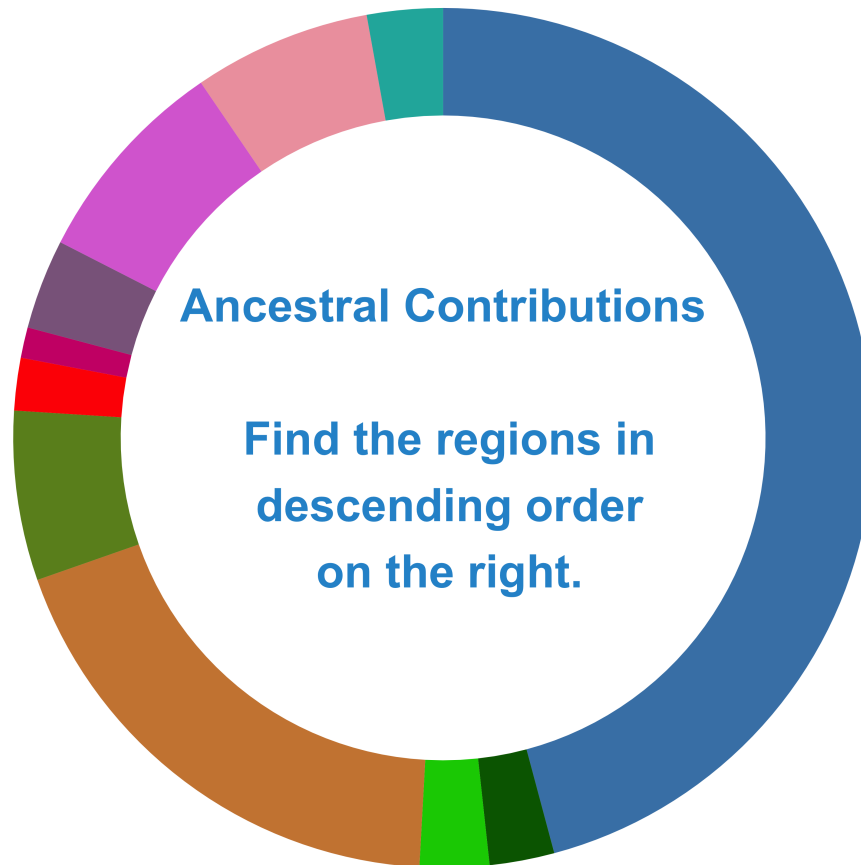


The Mediclinic Precise ancestry test looks at different parts of your genome, which carries specific information about your genetic history. The maternal lineage looks at mitochondrial DNA, which is passed down from mother to child, whilst the paternal lineage looks at the Y chromosome passed down from 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

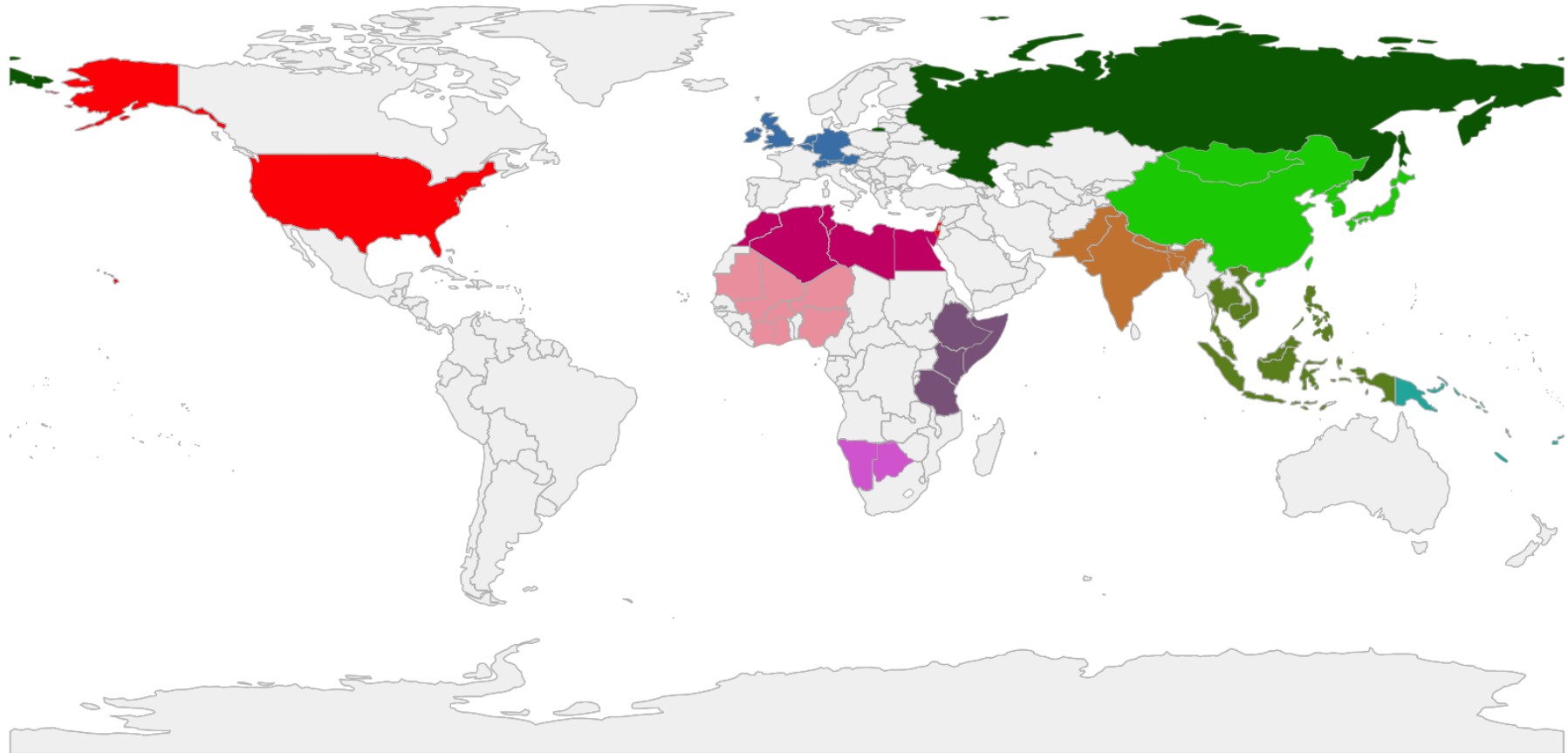
We traced your genetic history back to:



Region	Colour	Percentage
Western and Central Europe	Blue	45.52
Southern Asia	Brown	18.63
Southern Africa - KhoeSan	Purple	7.90
Western Africa	Pink	6.63
South Eastern Asia	Green	6.33
Eastern Africa	Dark Purple	3.36
Oceania	Teal	2.83
Eastern Asia	Bright Green	2.59
Northern Eurasia	Dark Green	2.42
Ashkenazi Jew	Red	1.96
Northern Africa	Magenta	1.14
Northern Europe	Cyan	0.00
Eastern Europe	Grey	0.00
Southern Europe	Dark Blue	0.00
Central Asia	Light Green	0.00
Western Asia	Orange	0.00
Middle East	Yellow	0.00
Arabian Peninsula	Tan	0.00
Southern Africa - Bantu-Speaking	Purple	0.00
Central Africa	Light Purple	0.00
Southern America	Dark Red	0.00
Latin America	Light Red	0.00
Ancient	Grey	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><b>WESTERN &amp; CENTRAL EUROPE</b> England, Wales, Northern Ireland, Ireland, Scotland The Netherlands, Germany, Switzerland, Austria, Belgium</p>		<p>Due to its sea locked location and proximity to both northern and southern Europe, the western regions of Europe (England, Scotland, Wales, Northern Ireland and Ireland), are wellknown for being the epicentre of revolutions, wars and invasions by multiple empires. It is also the location of what was once the largest empire in the world, known as the British Empire. London was the first city in the world to have an underground railway system, which opened in 1863. Central Europe includes countries that are occasionally considered to be part of Western Europe (The Netherlands, Germany, Belgium, Switzerland and Austria). Wilhelmus, the Dutch national anthem, is the oldest anthem that exists today. The East Side Gallery in Germany is the longest open-air art gallery (1.3km) in the world and was created as a preserved part of the former Berlin Wall.</p>
 <p><b>SOUTHERN ASIA</b> India, Sri Lanka, Bangladesh, Pakistan</p>		<p>This area has acted as a crossroad for people and goods over a number of centuries. One of the most well-known routes used is the Silk Road which connects Asia with southern Europe and East Africa. These trade networks lead to the development and growth of multiple civilisations along the route and allowed for people from various cultures to meet and interact. Today, this region which holds India and Pakistan (amongst others) is well known for their sport teams (especially cricket). Sri Lanka is one of the worlds largest tea producers and exporters.</p>
 <p><b>SOUTHERN AFRICA - KHOESAN</b> South Africa, Botswana, Namibia</p>		<p>The KhoeSan population is the oldest population worldwide and have ties in southern Africa for centuries. The KhoeSan population are made up of Khoekhoe populations who are agropastoralists and the San who were historically hunter-gatherers. These populations were the ones to first meet the Europeans as they arrived at the southern tip of South Africa in the 15th and 17th century. Today, this population can be found in the Northern Cape of South Africa, Namibia and Botswana.</p>

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











# YOUR RESULTS | Regions cont'd

REGION	MAP	DESCRIPTION
 <p><b>WESTERN AFRICA</b> Nigeria, Niger, Mali, Mauritania, Burkina Faso, Côte d'Ivoire</p>		<p>The history of western Africa can largely be divided into two periods, the first characterised by the earliest modern humans in the area who developed their strategy of agriculture and interacted with other African populations further north. The second period can be characterised by Iron Age empires, major intercontinental trade routes, colonisation and finally independence and growth. The Kingdom of Ghana was one of the most powerful empires in Africa. Liberia is Africa's first independent country.</p>
 <p><b>SOUTH EASTERN ASIA</b> Thailand, Cambodia, Indonesia, Malaysia, Vietnam, Myanmar, Nepal, Laos, Phillipines</p>		<p>This region encompasses Malaysia and Indonesia and falls in the trade route utilised by Europeans from the 17th century onwards. At that time, Indonesia (then known as the Dutch East Indies (DEI)) was colonised by the Netherlands. Many areas served as ports of call for the Europeans as well as sources for slaves during their journeys. During the 18th century, many slaves from this region were taken to the DEI's new colony, The Cape of Good Hope (now Cape Town). Indonesia has over 15 000 islands, where Java houses 600 million people (a fifth of the total population of South Eastern Asia). In Malaysia, you will find the plant with the world's largest leaves that can measure 3x2 metres long.</p>
 <p><b>EASTERN AFRICA</b> Somalia, Kenya, Tanzania, Ethiopia</p>		<p>The eastern region of Africa has been suggested to be the geographical origin of modern humans. More recently, it housed hunter-gatherers, pastoralists and a multitude of populations with diverse backgrounds, some with ancient links to Eurasia. It is thought that East Africans migrated south approximately 2000 years ago. Mount Kilimanjaro, the tallest mountain in Africa is located in Tanzania. Eastern Africa is home to a number of large lakes, Lake Victoria, Tanganyika and Lake Malawi.</p>





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



# YOUR RESULTS | Regions cont'd

REGION	MAP	DESCRIPTION
 <p><b>OCEANIA</b> Papua New Guinea, Fiji, Soloman Islands, Samoa, Tonga</p>		<p>Oceania consists of many islands, scattered across thousands of kilometres of the Pacific ocean. Papua New Guinea is the largest island in the Pacific Ocean. Fiji has 28 airports but only 4 paved runways. There is a tiny island within Soloman Island that is named Kennedy Island after John F. Kennedy had encountered it during his WWII career. Within the entire country of Samoa, there is only 1 city, named Apia.</p>
 <p><b>EASTERN ASIA</b> China, North and South Korea, Japan, Taiwan, Mongolia</p>		<p>The eastern regions of Asia encompass China, Japan, Korea and Taiwan. This region gained in power beginning approximately 2000 years ago with the rise of the Shang Dynasty in China. Major events in these regions include the various Chinese dynasties, the rise and fall of the Mongol Empire, the isolationism implemented due to increasing European contact and many cross-border and continent wars. Today, this region is standing out as a world leader in many fields and is thought to be the location of the next world power. There are over 1600 temples in Kyoto, Japan. A direct translation of the city name Hong Kong means fragrant harbour and is reminiscent of the trade that occurred in this harbour.</p>
 <p><b>NORTHERN EURASIA</b> Russia</p>		<p>Northern Eurasia is largely made up of Russia, the largest country in the world. Located inside the Arctic Circle, Norilsk is the world's most polluted industrial city as well as having a very harsh climate. Russia is also home to the oldest and deepest freshwater lake in the world, Lake Baikal. Almost half of Russia is covered in forests, making it the largest forest country worldwide.</p>

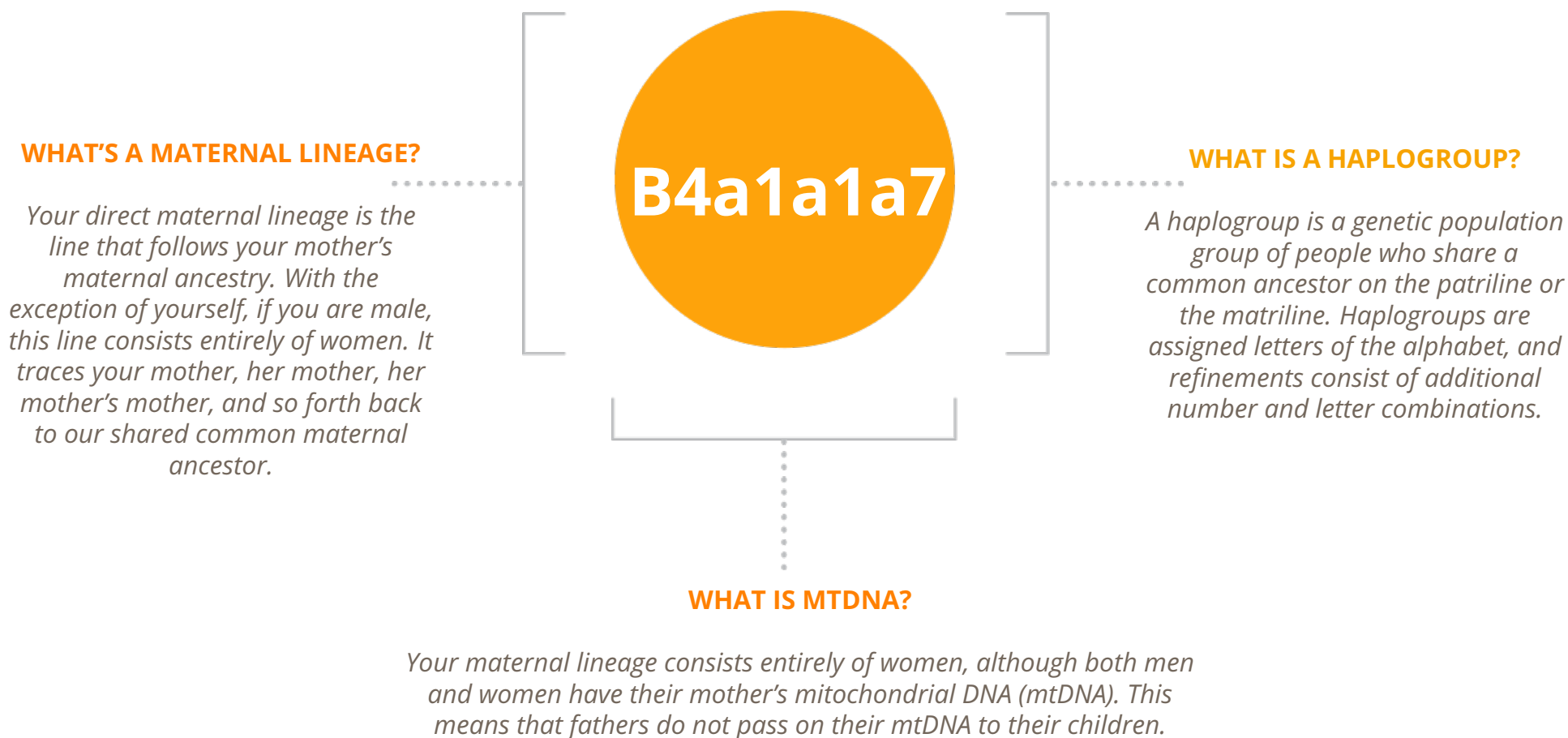
# YOUR RESULTS | Regions cont'd

REGION	MAP	DESCRIPTION
 <p><b>ASHKENAZI JEW</b> Israel and the United States of America</p>		<p>The Ashkenazi Jewish population are a Jewish diaspora population who speak traditionally Yiddish. The origin of this population is in Israel, but they moved into Europe and eventually the Americas from the Middle Ages onwards. The largest population today is in Israel and dispersed within the USA. Famous Ashkenazim include Albert Einstein, George Gershwin and Franz Kafka.</p>
 <p><b>NORTHERN AFRICA</b> Egypt, Libya, Tunisia, Algeria, Morocco</p>		<p>The northern region of Africa has a rich history extending back to the migration of modern humans coming from southern Africa into Eurasia dating at approximately 2 million years ago. More recently, the area has housed the Egyptians and the rise of the Egyptian Empire leading to one of the great marvels of the world, the Egyptian Pyramids. There are two geographical wonders in this region namely, the expansive Sahara Desert and the longest river in the world, the Nile.</p>



## YOUR RESULTS | Maternal Lineage

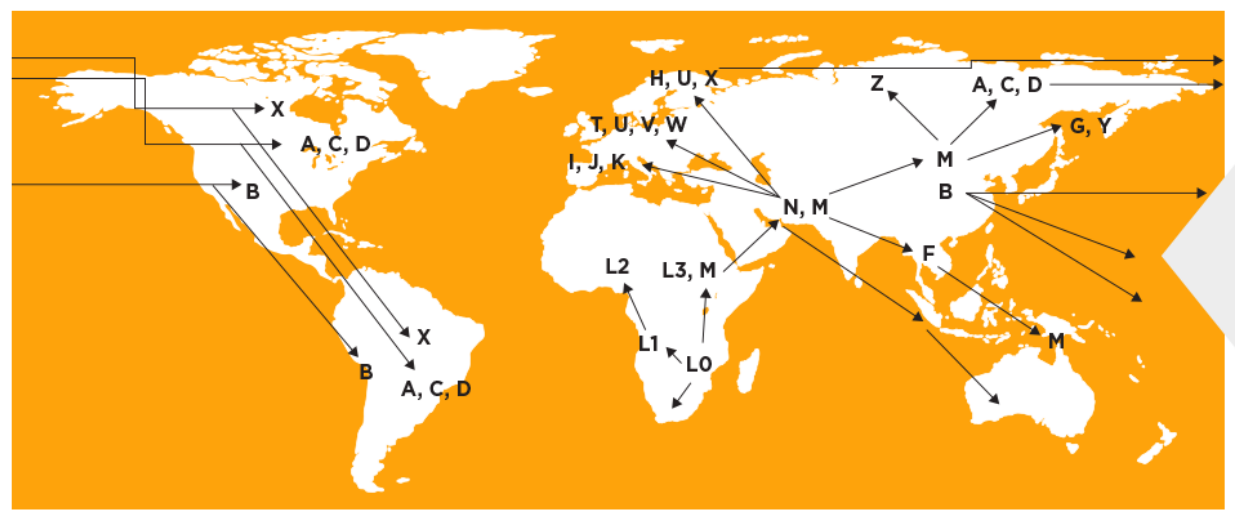
We traced your maternal lineage back thousands of years based on your mitochondrial DNA (mtDNA). Your mtDNA haplogroup is:



# YOUR RESULTS | Maternal Lineage cont'd

## B4a1a1a7

The time of origin of the B haplogroup is around 50 000 years ago. The B haplogroup is most commonly found in South Eastern Asia, and is also a maternal lineage of Native Americans. Elvis Presley, the American rock legend and cultural icon, shares this B haplogroup with you.



This map shows the connection between every mtDNA haplogroup.

**?** Can you find your major mtDNA 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 Female	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 Female	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 Female	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 Female	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 Female	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 Female	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 Female	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 Female	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 Female	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 Female	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](mailto: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

