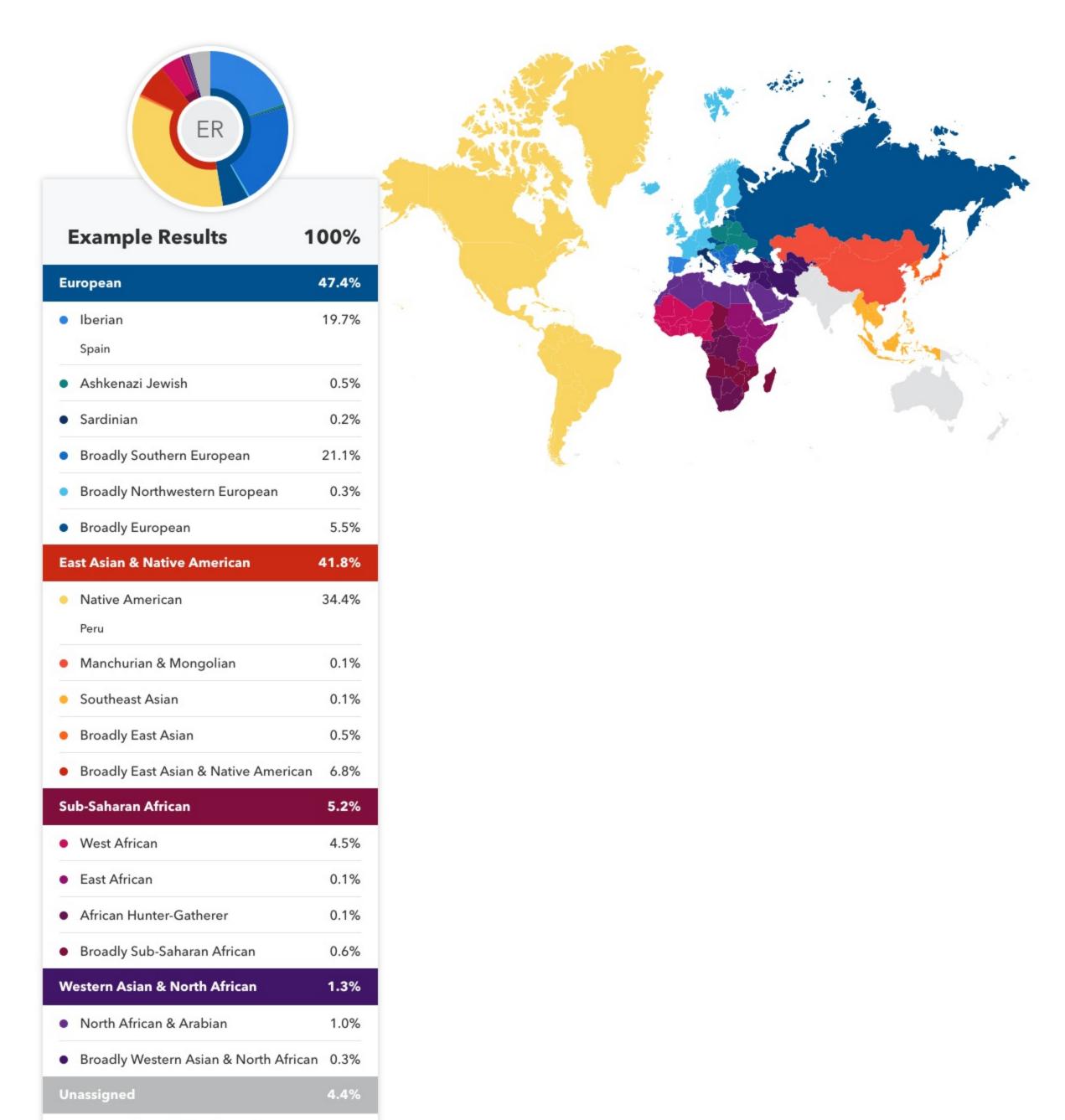
23andMe **REPORTS TOOLS** Example Re... > HOME RESEARCH Scientific Details Frequently Asked Questions Summary

Your DNA tells the story of who you are and how you're connected to populations around the world. Trace your heritage through the centuries and uncover clues about where your ancestors lived and when.



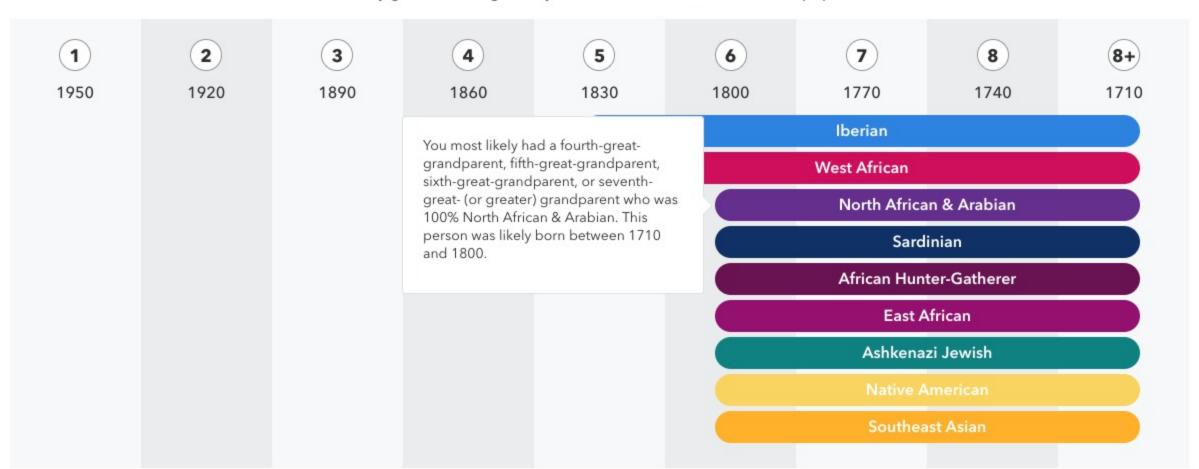
## **Ancestry Composition**



### How many generations ago was your most recent ancestor for each population?

Your Ancestry Timeline

See all tested populations

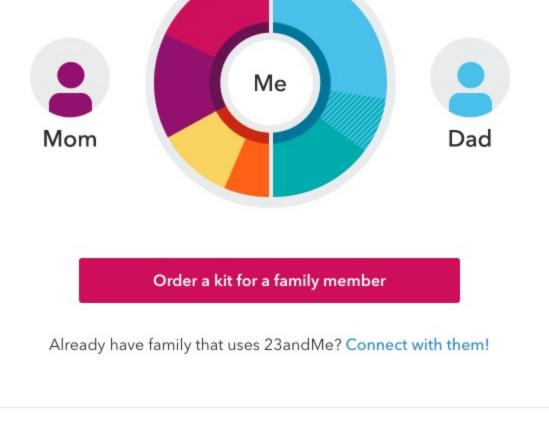


How much of each ancestry did you inherit from your

Learn about how to interpret this result >

### parents? Connect a parent on 23andMe to see what ancestries you inherited from each parent. Or, connect with your children so they can see what you passed down to them. Learn more about the benefits of

connecting.



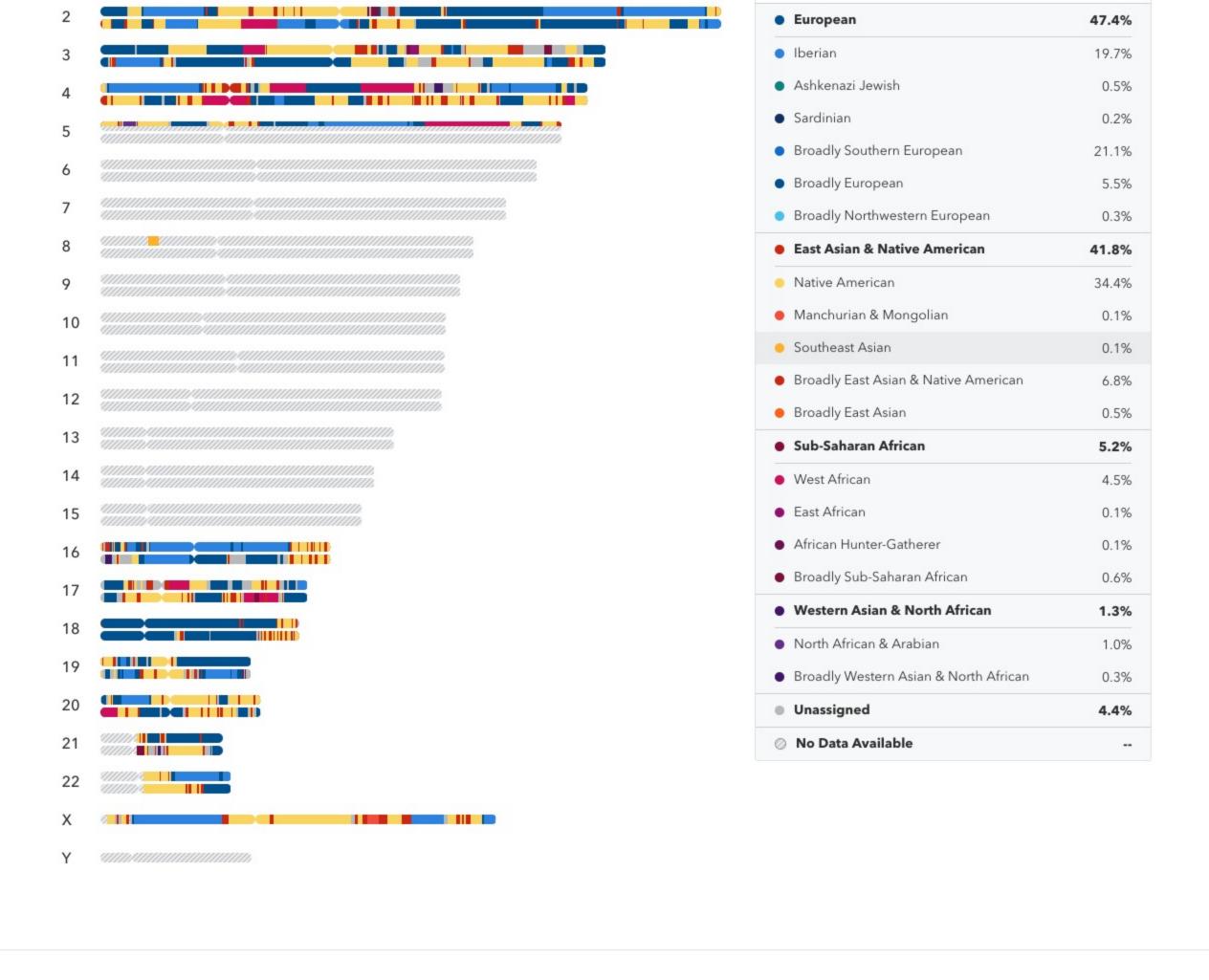
#### called autosomes and come in pairs of two, each represented by one of the colored horizontal lines in the graphic below. Chromosomes have different lengths, and are named 1 through 22, when sorted by size (scientists are not very creative). Lastly, we also look at ancestry on your X chromosome: two copies like the

These are your chromosomes; we've painted them with your Ancestry Composition results. The first 22 are

Your Ancestry Composition Chromosome Painting

autosomes if you are female, and only one copy if you're male (that you got from mom). Change confidence level > **Example Results** 

100%



# Do more with your Ancestry Composition results.



Privacy '

customers interested in Ancestry Composition results.

Discuss

Join the discussion with other 23andMe



Learn more about the reference

populations we use to determine your

result.

Help

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## **Scientific Details**

Ancestry Composition

REPORTS

#### How we calculate your ancestral breakdown To determine your ancestral breakdown, we use an algorithm that individually

looks at short pieces of DNA across your genome. We compare each piece to

DNA sequences from 31 ancestral reference populations from around the world, which include over 10,000 individuals with known ancestry. When a piece of your DNA resembles the DNA from a specific reference population with a high degree of certainty, it is assigned to that population. Sometimes a piece of DNA resembles reference DNA from several populations, in which case it is assigned to a "broad" ancestry (e.g. Northwestern European). The results of these assignments are tallied across your genome to determine your results. Read our Ancestry Composition Guide or our white paper for more information about how we assign your DNA to different ancestries.



segments with five or more individuals from a specific location (excluding your close relatives), that location is assigned to you. The strength of that assignment (the "match strength") is determined by how much of your DNA you share with people from that location, adjusting for the number of people that we compared you with. When interpreting your results, keep in mind the following:

 Country borders have changed a lot even within the past 100 years, which can sometimes produce counter-intuitive results. . If you don't see an expected ancestry location, that doesn't necessarily mean that you don't have ancestors who lived there. It could

changes to your results over time.

How we determine your recent ancestor locations

Have more questions? Check out the Frequently Asked Questions section.

To determine your recent ancestor locations, we look for identical pieces of DNA that you have in common with individuals of known

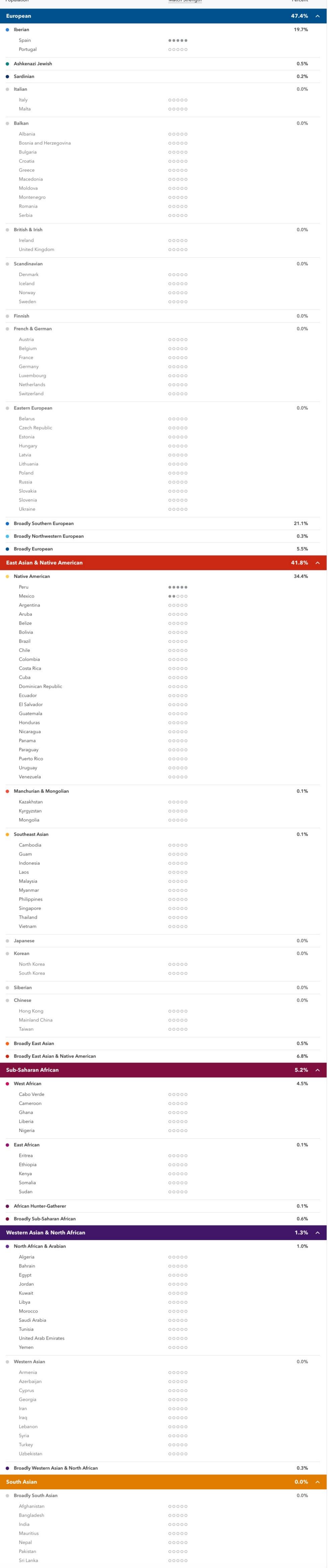
simply mean that you do not have enough shared DNA with our reference dataset for us to confidently assign that location to you.

· We determine these results in real time, meaning that new locations can arise as our database grows and you should expect to see

ancestry from over 120 countries and territories in Europe, Africa, the Americas, Asia, and Oceania. If you share identical DNA

Population Match Strength Percent

Your Results for All 151 Tested Populations



23andMe Total Public Data\* Population Individuals Customers East Asian and Native American 808 560 1368 Native American (Colombian, Karitiana, Maya, Pima, Surui), East Asian, Japanese, Korean (South Korean), Siberian, Manchurian (Daur, Hezhen, Mongolian, Oroqen, Tu, Xibo), Chinese (Chinese, Han, Hong Kongese, Taiwanese) Southeast Asian (Burmese, Cambodian, Indonesian, Lao, Malaysian, Filipino, Thai, Vietnamese) 6421 421 6842 European Southern European, Italian (Italian, Northern Italian, Tuscan), Balkan (Albanian, Bosnian and Herzegovinian, Bulgarian, Croatian, Greek, Macedonian, Maltese, Montenegrin, Romanian, Serbian), Sardinian, Iberian (France Basque, Portuguese, Spanish), Northwestern European, British and Irish (Irish, United Kingdom), French and German (Austrian, French, German, Belgian, Dutch, Swiss), Scandinavian (Danish, Norwegian, Swedish), Finnish, Ashkenazi, Eastern European (Belarusians, Czechs, Hungarians, Polish, Russian, Slovak, Slovene, Ukrainian) Melanesian 3 36 39 Broadly Melanesian (Non-Austronesian Melanesian, Palauan, Tongan) 822 South Asian 207 615 Broadly South Asian (Afghan, Balochi, Bangladeshi, Brahui, Burusho, Hazara, Indian, Kalash, Makrani, Nepalese, Pakistani, Pathan, Sindhi, Sri Lankan, Uygur) Sub-Saharan African 228 393 621 West African (Bantu, Cameroonian, Ghanian, Ivorian, Liberian, Luhya, Mandenka, Nigerian, Sierra Leonean, Yoruba), East African (Eritrean, Ethiopian, Maasai, Somali), African Hunter-Gatherer (Biaka Pygmies, Mbuti Pygmies, San) 726 West Asian and North African 550 176 West Asian (Armenian, Azerbaijani, Cypriot, Georgian, Druze, Iranian, Iraqi, Lebanese, Turkish, Syrian), North African & Arabian (Algerian, Bahrani, Bedouin, Egyptian, Jordanian, Kuwaiti, Moroccan, Mozabite, Palestinian, Saudi Arabian, Tunisian, Emirati, Yemeni) \* Public Reference Set includes HGDP, 1000 Genomes, HapMap3

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50% ~

There is a wide range of human diversity out there, and sometimes our algorithm can't pinpoint a region of your DNA to a specific population. Bear

Download your Ancestry Composition raw data for even more information. Genomic coordinates (NCBI Build 37) for your Ancestry Composition results are available in CSV format.

Download Raw Data

Our Reference Datasets

This table shows the number of reference individuals used to define each broad ancestry population. The reference datasets are made up of over 10,000 people, including publicly available data from the Human Genome Diversity Project , HapMap , and the 1000 Genomes project, as well as a large number of 23andMe customers who have consented to participate in research.

with us as our data and resources continue to expand. We expect the amount of unassigned ancestry our customers see to decrease.

Select Confidence Level 🕕

## Your report may occasionally be updated based on new information. This Change Log describes updates and revisions to this report.

Change Log

Your genetic results were first available from 23andMe. The Ancestry Composition report was updated with 120 additional regions.

Nov. 8, 2017 The Ancestry Composition results of customers on the V5 platform were updated to reflect improvements in our algorithm. Oct. 21, 2015 Ancestry Composition report created.

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Date

March 28, 2018

Feb. 16, 2018

Melanesian

Fiji

Samoa

Tonga

Unassigned

Broadly Melanesian

American Samoa

Change

0.0%

0.0%

4.4%