

R-M269 verses R1b1a1a2

Updated 2023

Haplogroup R is one of the major Y-Chromosome Haplogroups with its attending subgroups called haplotypes. The current reporting format was designed in 2002 by the Y Chromosome Consortium (YCC) in 2002. While the YCC is no longer active, their Haplogroup formatting system lives on with a new shorthand coding. See: https://isogg.org/wiki/Y_Chromosome_Consortium_Haplogroup

Haplogroup R1b1a1a2, in the formal long hand code, was once referred to as the Western Atlantic Modal Haplogroup (WAMH) but is more commonly known as the Atlantic Modal Haplogroup (AMH). It is one of the most common Haplogroups in Western Europe. See more at: https://en.wikipedia.org/wiki/Atlantic_modal_haplotype

Because the Haplogroup R1b1a1a2 density often exceeds 60% and even up to 90% in some Western European countries those with this Haplogroup should consider the minimal Y-DNA test or starter test to be 37 markers and more markers like 111 markers are better.

Haplogroup **R1b1a1a2** is defined or qualified by a specific SNP (single nucleotide polymorphism) labeled as **M269**. Please remember it takes a special SNP test to confirm this SNP (pronounced snip). I will explain this below in more detail.

The combination of the major Haplogroup **R** and all its sub-types along with the estimated SNP **M269** combines into a short hand code called **R-M269**.

R-M269 is the shorthand for the long hand Haplogroup R1b1a1a2 with the estimated SNP (single nucleotide polymorphism) of M269 or SNP M(marker)269. SNPs discovered by other companies use another code (other than M) before the estimated SNP marker value. See: http://isogg.org/tree/ISOGG_HapgrpR.html

Both R-M269, which is becoming more commonly used, and R1b1a1a2, which is more formal but now not used, essentially mean the same Haplogroup. Technically it is a Haplotype but the two terms are now almost synonymous today.

Most confusion often arises whether or not the SNP M269 is **real** (derived or positive) or **estimated** (guessed or calculated).

SNPs are either estimated or derived (aka confirmed) via testing for the specific SNP. Basic SNPs can be estimated fairly accurately based on the first 10-12 DYS markers used in a Y-DNA test. There are calculators for this online. FTDNA uses one to estimate the short hand code. Please remember that **estimated does not mean confirmed**.

Far too many people assume that the estimated SNP is factual and it can cause problems and confusion. And even derived (+ or positively tested) SNPs are dependent on when that test was done and by which DNA testing company. There has been an explosion of

new SNPs being discovered through Next Generation techniques thus rendering older SNP testing obsolete. This includes the Big Y 500/700 SNP testing program at Family Tree DNA (FTDNA.com).

<https://help.familytreedna.com/hc/en-us/sections/360001357875-Big-Y-Results-Matches>

New Y-SNPs are now being found through several DNA testing companies. Tests like the Big Y at FTDNA now finds private SNPs that have the potential to become a unique-event polymorphism (UEP) marker. UEPs are a genetic marker like a Y-SNP or occasionally a Y-STR (short term repeat) allele that derive from a single mutational event and which is carried through descendant generations. These when properly matched or vetted with another person with the same private SNP helps create newly discovered SNPs. https://en.wikipedia.org/wiki/Unique-event_polymorphism

The term “**Terminal SNP**” is a bit of a misnomer. At least until all private variances or potential private SNPs are resolved. Older SNP testing using Chip technology only looks for SNPs they are programmed to look for. They can not find new SNPs unlike the Big Y Program. <https://dna-explained.com/2017/11/29/glossary-terminal-snp/>

Companies like 23andMe provide an older Y-SNP test as a freebee or an add on to their Autosomal DNA (atDNA) tests. **But they fail to explain** that the SNPs tested are not “terminal SNPs” and that the Chip technology used is out of date.

In July of 2023 FTDNA started providing a similar freebee to their atDNA tests they call Family Finder using an older Chip technology.

FTDNA uses colors like **red** for an estimated Haplogroup and **green** for **confirmed on their DNA results tables.** In more formal SNP testing usually you will see a positive sign (+) for derived meaning the SNP is present. If the SNP is not present, or not confirmed, then a negative sign (-) is used.

This means at FTDNA **one often sees multiple green confirmed SNPs of older, not so old and newer confirmed SNPs with the same Green color.** Without a road map of SNPs, such as with the ISOGG Haplogroup Y-Tree or from Y-Full Y-Tree, people get easily confused.

<https://isogg.org/tree/>

<https://www.yfull.com/tree/>

Even FTDNA Y-Tree shows two different Y-Tree views. The public tree shows Y-SNPs but only when you have taken a Y-DNA test or a Y-SNP test will that Y-Tree show colors representing ...

Green = Tested Positive – They now have added a “+” sign!

Red = Tested Negative – They have now added a “-“ sign!

Blue = Downstream

Orange = Presumed Positive

Gray = Presumed Negative

<https://www.familytreedna.com/public/y-dna-haplotree/A>

This color coding compared to the **FTDNA DNA results tables** for Haplogroups **are not clear nor are they defined on those pages**. For example, please see the Carpenter Cousins Y-DNA (surname) Project colorized table at:

<https://www.familytreedna.com/public/carpenter%20cousins%20%20dna?iframe=ycolored>

It is up to the Group Administrators to explain that on older projects one sees the following incongruence or oddities in Haplogroup colors:

We see two types (2) of **Red** estimated Haplogroups. One is an older estimation before 2004. But they are still the same shade of **Red**.

We see now four (4) types of **Green** Haplogroups. These are two older SNP testing programs then one older one that used Chip technology and the fourth being SNPs defined by the Big Y 500/700 program. And they are all the same shade of **Green**.

Then to make things even more confusing for members regarding posted **Green** Haplogroups **under the Big Y SNP Program ... The posted **Green** Haplogroup can change without notice to another Y-SNP name at FTDNA. This **Green** “Terminal SNP” **is automatically changed when a private SNP becomes a public or new SNP.****

To avoid some confusion, wouldn't it be nice if FTDNA simply used a different color for their Big Y Haplogroup names? Like the color Black?

And maybe to provide a color coding guide on their **DNA results tables**? Maybe something like the following for Haplogroup colors?

Green = Tested Positive

Red = Estimated

Black = Current “Terminal Big Y SNP”

One could always wish!

And by now, dear reader, you are one of the more educated genetic genealogy users that have a better understanding of how Y-SNPs are posted and used with their major Haplogroup code followed by SNP marker name.

This especially for Haplogroup R1b1a1a2 which is now better known as R-M269.

For more on SNPs and R-M269, see:

http://isogg.org/wiki/Single-nucleotide_polymorphism

https://en.wikipedia.org/wiki/Single-nucleotide_polymorphism

See more at:

https://en.wikipedia.org/wiki/Haplogroup_R1b

https://en.wikipedia.org/wiki/Haplogroup_R-M269

<http://www.bbc.com/news/science-environment-14630012>

https://gap.familytreedna.com/media/docs/2013/Hammer_M269_Diversity_in_Europe.pdf

See Also:

<https://discover.familytreedna.com/y-dna/R-M269/story>

<https://www.familytreedna.com/groups/r-1b/about/results>

Note:

Haplogroup R1 defined by Y-SNP M173 has two major subtypes. Haplotypes R1a (M420) and R1b (M343) became descendants of R1 during the last ice age. Y-SNP R-M269 is a descendant of R1b.

https://en.wikipedia.org/wiki/Haplogroup_R1b

<https://discover.familytreedna.com/y-dna/R-M343/story>

<https://www.familytreedna.com/groups/r-1b/about/results> - Those with the R-M269

Haplogroup are encouraged to **JOIN** the R1b Project.

R1b Y-Trees:

<https://www.yfull.com/tree/R1b/>

<https://www.familytreedna.com/public/y-dna-haplotree/R;name=R-M343>

<https://docs.google.com/spreadsheets/d/1JvXoBCBBk42DIF7BYPaLsQ1jojN3etgDR8pByaTRnq4/edit#gid=1078904281> – The ISOGG Y-Tree for Haplogroup R - Use Edit –

Find = R1b to see that part of the descendant tree.