(BACK)

raw data source snps clean.vcf (36MB) WARNING: Can't understand this line: X 2321 rs28503286

mthap version 0.19b (2015-05-11); haplogroup data version PhyloTree Build 17 (2016-02-18) +mods

WARNING: Can't understand this line: X 32130 rs28696811 G

WARNING: Can't understand this line: X 118624 rs6644972 WARNING: Can't understand this line: X 122276 rs28475515 C

WARNING: Can't understand this line: X 109805 rs6423165

WARNING: Can't understand this line: X 131998 rs28463388

WARNING: Can't understand this line: X 135014 rs28669107

WARNING: Can't understand this line: X 141935 rs6655397

WARNING: Can't understand this line: X 142458 rs7890186

WARNING: Can't understand this line: X 6426

rs7474053

GTGTGT

GT

GT

GT

GT

GT

GT

GT

PR

0/0 0/1 0/1

0/0

0/0

0/0

0/0

0/0

0/0 0/0

rCRSdiff format was uploaded. Based on the markers found, assuming the following regions were completely sequenced: HVR1 (16001~16569) HVR2 (1~574) CR (575~16000). Found 4398234 markers at 3464511 positions covering 100.0% of mtDNA.

Markers found (shown as differences to rCRS):

### HVR2: 1A 2G 3C 4T 5G 6T 7G 8A 9A 10C 11T 12C 13G 14C 15T 16G 17T 18T 19T 20C 21G 22C CR: 3034C 8547C 8674G 8856A 11244C 11799A 12344C 13546G 13905T 14417G 15463G 15694G

**Best mtDNA Haplogroup Matches:** 

1) H2a2a1

**Defining Markers for haplogroup H2a2a1:** HVR2:

HVR1:

HVR2:

HVR1:

CR: 8182T

14417G 15463G 15694G

**Mismatches(1): 8182C** 

14417G 15463G 15694G

Mismatches(1): 93A

CR: HVR1:

Marker path from rCRS to haplogroup H2a2a1 (plus extra markers):  $H2a2a1(rCRS) \Rightarrow 1A\ 2G\ 3C\ 4T\ 5G\ 6T\ 7G\ 8A\ 9A\ 10C\ 11T\ 12C\ 13G\ 14C\ 15T\ 16G\ 17T\ 18T\ 19T\ 20C\ 21G\ 22C\ 3034C\ 8547C\ 8674G\ 8856A\ 11244C\ 11799A\ 12344C\ 13546G\ 13905T\ 14417G\ 15463G\ 15694G$ 

**Good Match!** Your results also had extra markers for this haplogroup: Extras(34): 1A 2G 3C 4T 5G 6T 7G 8A 9A 10C 11T 12C 13G 14C 15T 16G 17T 18T 19T 20C 21G 22C 3034C 8547C 8674G 8856A 11244C 11799A 12344C 13546G 13905T 14417G 15463G 15694G

**Defining Markers for haplogroup H2a2a1e:** 

**Defining Markers for haplogroup H2a2a1f:** 

2) H2a2a1e

Marker path from rCRS to haplogroup H2a2a1e (plus extra markers):  $H2a2a1(rCRS) \Rightarrow 8182T \Rightarrow H2a2a1e \Rightarrow 1A\ 2G\ 3C\ 4T\ 5G\ 6T\ 7G\ 8A\ 9A\ 10C\ 11T\ 12C\ 13G\ 14C\ 15T\ 16G\ 17T\ 18T\ 19T\ 20C\ 21G\ 22C\ 3034C\ 8547C\ 8674G\ 8856A\ 11244C\ 11799A\ 12344C\ 13546G\ 13905T$ 

Extras(34): 1A 2G 3C 4T 5G 6T 7G 8A 9A 10C 11T 12C 13G 14C 15T 16G 17T 18T 19T 20C 21G 22C 3034C 8547C 8674G 8856A 11244C 11799A 12344C 13546G 13905T 14417G 15463G 15694G

2) H2a2a1f

Imperfect Match. Your results contained differences with this haplogroup:

Marker path from rCRS to haplogroup H2a2a1g (plus extra markers):

Imperfect Match. Your results contained differences with this haplogroup:

HVR1: Marker path from rCRS to haplogroup H2a2a1f (plus extra markers):

 $H2a2a1(rCRS) \Rightarrow 93G \Rightarrow H2a2a1f \Rightarrow 1A\ 2G\ 3C\ 4T\ 5G\ 6T\ 7G\ 8A\ 9A\ 10C\ 11T\ 12C\ 13G\ 14C\ 15T\ 16G\ 17T\ 18T\ 19T\ 20C\ 21G\ 22C\ 3034C\ 8547C\ 8674G\ 8856A\ 11244C\ 11799A\ 12344C\ 13546G\ 13905T$ 

2) H2a2a1g

HVR1: 16189C

HVR2: 93G

CR:

**Defining Markers for haplogroup H2a2a1g:** HVR2: CR:

 $H2a2a1(rCRS) \Rightarrow 16189C \Rightarrow H2a2a1g \Rightarrow 1A\ 2G\ 3C\ 4T\ 5G\ 6T\ 7G\ 8A\ 9A\ 10C\ 11T\ 12C\ 13G\ 14C\ 15T\ 16G\ 17T\ 18T\ 19T\ 20C\ 21G\ 22C\ 3034C\ 8547C\ 8674G\ 8856A\ 11244C\ 11799A\ 12344C\ 13546G$ 

Extras(34): 1A 2G 3C 4T 5G 6T 7G 8A 9A 10C 11T 12C 13G 14C 15T 16G 17T 18T 19T 20C 21G 22C 3034C 8547C 8674G 8856A 11244C 11799A 12344C 13546G 13905T 14417G 15463G 15694G

# Imperfect Match. Your results contained differences with this haplogroup:

13905T 14417G 15463G 15694G

13905T 14417G 15463G 15694G

**Defining Markers for haplogroup H2a2a1b:** 

2) H2a2a1b

Extras(34): 1A 2G 3C 4T 5G 6T 7G 8A 9A 10C 11T 12C 13G 14C 15T 16G 17T 18T 19T 20C 21G 22C 3034C 8547C 8674G 8856A 11244C 11799A 12344C 13546G 13905T 14417G 15463G 15694G

## Marker path from rCRS to haplogroup H2a2a1b (plus extra markers): $H2a2a1(rCRS) \Rightarrow 9299G \Rightarrow H2a2a1b \Rightarrow 1A\ 2G\ 3C\ 4T\ 5G\ 6T\ 7G\ 8A\ 9A\ 10C\ 11T\ 12C\ 13G\ 14C\ 15T\ 16G\ 17T\ 18T\ 19T\ 20C\ 21G\ 22C\ 3034C\ 8547C\ 8674G\ 8856A\ 11244C\ 11799A\ 12344C\ 13546G$

CR: 9299G

HVR2:

HVR1:

Extras(34): 1A 2G 3C 4T 5G 6T 7G 8A 9A 10C 11T 12C 13G 14C 15T 16G 17T 18T 19T 20C 21G 22C 3034C 8547C 8674G 8856A 11244C 11799A 12344C 13546G 13905T 14417G 15463G 15694G

# 2) H2a2a1d **Defining Markers for haplogroup H2a2a1d:**

HVR1: 16172C

HVR2:

CR:

**Mismatches(1): 9299A** 

Marker path from rCRS to haplogroup H2a2a1d (plus extra markers):  $H2a2a1(rCRS) \Rightarrow 16172C \Rightarrow H2a2a1d \Rightarrow 1A 2G 3C 4T 5G 6T 7G 8A 9A 10C 11T 12C 13G 14C 15T 16G 17T 18T 19T 20C 21G 22C 3034C 8547C 8674G 8856A 11244C 11799A 12344C 13546G$ 13905T 14417G 15463G 15694G

Imperfect Match. Your results contained differences with this haplogroup:

Imperfect Match. Your results contained differences with this haplogroup: **Mismatches(1): 16172T** 

2) H2a2a1h

**Defining Markers for haplogroup H2a2a1h:** HVR2:

Extras(34): 1A 2G 3C 4T 5G 6T 7G 8A 9A 10C 11T 12C 13G 14C 15T 16G 17T 18T 19T 20C 21G 22C 3034C 8547C 8674G 8856A 11244C 11799A 12344C 13546G 13905T 14417G 15463G 15694G

## CR: HVR1: 16320T

HVR2:

**Mismatches(1): 15314G** 

HVR2: 263G

3) H2a2a1c

HVR1: 16051G

CR: HVR1:

 $H2a2a1(rCRS) \Rightarrow 16320T \Rightarrow H2a2a1h \Rightarrow 1A2G3C4T5G6T7G8A9A10C11T12C13G14C15T16G17T18T19T20C21G22C3034C8547C8674G8856A11244C11799A12344C13546G$ 13905T 14417G 15463G 15694G Imperfect Match. Your results contained differences with this haplogroup:

Marker path from rCRS to haplogroup H2a2a1h (plus extra markers):

**Mismatches(1): 16320C** Extras(34): 1A 2G 3C 4T 5G 6T 7G 8A 9A 10C 11T 12C 13G 14C 15T 16G 17T 18T 19T 20C 21G 22C 3034C 8547C 8674G 8856A 11244C 11799A 12344C 13546G 13905T 14417G 15463G 15694G

2) H2a2a1a

 $H2a2a1(rCRS) \Rightarrow 15314A \Rightarrow H2a2a1a \Rightarrow 1A 2G 3C 4T 5G 6T 7G 8A 9A 10C 11T 12C 13G 14C 15T 16G 17T 18T 19T 20C 21G 22C 3034C 8547C 8674G 8856A 11244C 11799A 12344C 13546G$ 

Extras(34): 1A 2G 3C 4T 5G 6T 7G 8A 9A 10C 11T 12C 13G 14C 15T 16G 17T 18T 19T 20C 21G 22C 3034C 8547C 8674G 8856A 11244C 11799A 12344C 13546G 13905T 14417G 15463G 15694G

### CR: 15314A HVR1:

Marker path from rCRS to haplogroup H2a2a1a (plus extra markers):

**Defining Markers for haplogroup H2a2a1a:** 

13905T 14417G 15463G 15694G **Imperfect Match.** Your results contained differences with this haplogroup:

2) H2a2a **Defining Markers for haplogroup H2a2a:** 

## Marker path from rCRS to haplogroup H2a2a (plus extra markers): H2a2a1(rCRS) ⇒ 263G ⇒ H2a2a ⇒ 1A 2G 3C 4T 5G 6T 7G 8A 9A 10C 11T 12C 13G 14C 15T 16G 17T 18T 19T 20C 21G 22C 3034C 8547C 8674G 8856A 11244C 11799A 12344C 13546G 13905T 14417G 15463G 15694G

Imperfect Match. Your results contained differences with this haplogroup: Mismatches(1): 263A Extras(34): 1A 2G 3C 4T 5G 6T 7G 8A 9A 10C 11T 12C 13G 14C 15T 16G 17T 18T 19T 20C 21G 22C 3034C 8547C 8674G 8856A 11244C 11799A 12344C 13546G 13905T 14417G 15463G 15694G

**Defining Markers for haplogroup H2a2a1c:** HVR2: CR: 6632C

Marker path from rCRS to haplogroup H2a2a1c (plus extra markers):

**Imperfect Match.** Your results contained differences with this haplogroup: Mismatches(2): 6632T 16051A Extras(34): 1A 2G 3C 4T 5G 6T 7G 8A 9A 10C 11T 12C 13G 14C 15T 16G 17T 18T 19T 20C 21G 22C 3034C 8547C 8674G 8856A 11244C 11799A 12344C 13546G 13905T 14417G 15463G 15694G

Need help?

 $H2a2a1(rCRS) \Rightarrow 6632C \ 16051G \Rightarrow H2a2a1c \Rightarrow 1A\ 2G\ 3C\ 4T\ 5G\ 6T\ 7G\ 8A\ 9A\ 10C\ 11T\ 12C\ 13G\ 14C\ 15T\ 16G\ 17T\ 18T\ 19T\ 20C\ 21G\ 22C\ 3034C\ 8547C\ 8674G\ 8856A\ 11244C\ 11799A\ 12344C$ 13546G 13905T 14417G 15463G 15694G

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