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Ashkenazi Jews, who have resided in various European countries during the Diaspora, traditionally trace their origin to the Jewish people that lived in the Holy Land before the Roman exile. However, some studies claimed that a substantial part of Ashkenazim were descendants of Eastern European non-Jews. In particular, according to Middle Age historians, the Khazars from a small kingdom near the Caspian Sea converted en masse to Judaism proportion of Europeans in Ashkenazi Jews was estimated to be 0.5% per generation,

 $^{\rm 3}$ indicating that Ashkenazim remained, to a large extent, genetically isolated throughout their history.

Ashkenazim were found to have a significantly higher frequency of the R-M17 haplogroup compared with Sephardic and Kurdish Jews. $^{4.5}$ Interestingly, Behar et al reported R-M17 to be the dominant haplogroup in Ashkenazi Levites ($\sim 52\%$), although rare in Ashkenazi Cohanim (1.3%) and Israelites (4%). R-M17, the most common haplogroup in Eastern Europe, was suggested to

suggests gene flow from an external population into the Ashkenazi gene pool.

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