

# NutraHacker

Celiac Report for Customer: 16b3a1d2-1cc8-4b35-972c-b83fceb0a109

## Instructions:

In this report, NutraHacker examines single nucleotide polymorphisms that pertain to Celiac.

Celiac is present in 1/133 people. In people with physical symptoms, Celiac is present in 1/56 people. About 95% of Celiac individuals express some form of HLA-DQ2 and the remainder are mostly HLA-DQ8 positive. HLA-DQ2 is carried by about a third of Caucasians, thus HLA-DQ2 or -DQ8 is necessary but not sufficient for Celiac.

This report is not a diagnostic test, but has negative predictive value since Celiac is highly unlikely when the predisposing alleles are absent. A positive result indicates some genetic predisposition for Celiac but it is still unlikely overall.

Table 1 indicates HLA status as pertinent to Celiac. It is not a comprehensive analysis of HLA, which is one of the most complex genes in the human body! Most people will not have data for DQ4 and DQ7 since those do not seem to be genotyped often, but those variants are uncommon.

[In a group of individuals with your HLA Haplotype \(DQ2.2/low risk allele\), 0.7 percent were observed to have anti-gluten antibodies, a marker for Celiac.](#)

## Sources:

<http://www.celiaccentral.org/ceciac-disease/facts-and-figures/>

[http://www.uchospitals.edu/pdf/uch\\_007937.pdf](http://www.uchospitals.edu/pdf/uch_007937.pdf)

<http://emedicine.medscape.com/article/1790189-overview>

J Biomed Sci. 2012 Oct 11;19:88. doi: 10.1186/1423-0127-19-88.

PLoS One. 2008 May 28;3(5):e2270. doi: 10.1371/journal.pone.0002270.

Clin Gastroenterol Hepatol. 2009 Sep;7(9):966-71. doi: 10.1016/j.cgh.2009.05.028. Epub 2009 Jun 23.

Gastroenterology. 2009 Sep;137(3):834-40, 840.e1-3. doi: 10.1053/j.gastro.2009.05.040. Epub 2009 May 18.

Gender of customer: Male

**Table 1: HLA Haplotype**

Source: PLoS One. 2008 May 28;3(5):e2270. doi: 10.1371/journal.pone.0002270.

rsID	Haplotype	Positive Allele	Your Genotype	Detected
rs2395182	DQ2.2 (DQA1*0201/DQB1*0202)	T	TT	Homozygous
rs7775228	DQ2.2 (DQA1*0201/DQB1*0202)	C	CT	Heterozygous
rs4713586	DQ4	G	N/A	N/A
rs2187668	DQ2.5 (DQA1*05/DQB1*02)	T	CC	Not Detected
rs4639334	DQ7 (DQA1*0505/DQB1*0301)	A	N/A	N/A
rs7454108	DQ8 (DQA1*03/DQB1*0302)	C	TT	Not Detected

**Celiac Data Interpretation based on: Stratifying risk for celiac disease in a large at-risk United States population by using HLA alleles.**

**Sources:**

Clin Gastroenterol Hepatol. 2009 Sep;7(9):966-71. doi: 10.1016/j.cgh.2009.05.028. Epub 2009 Jun 23.

**NutraHacker Original Research\***

Haplotype	Haplotype Prevalence*	Percent with anti-gluten antibodies
DQ2 homozygous	5.5	28.3
DQ2.2/other risk allele	3	13.7
DQ2/DQ8	2.3	11.8
DQ2.5 heterozygous	14.9	9.1
DQ8 homozygous	1.2	8.4
DQ8 heterozygous	13.3	2.1
DQ2.2/low risk allele	17.2	0.7
(DQ2 and DQ8) negative	42.6	0.2

Your haplotype is highlighted in blue in the table directly above.