

☆ Celiac disease (Dubois, 2010)

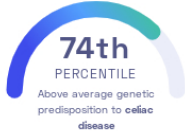
Patrick Dubois, et al.
Nature Genetics

Intestines Autoimmunity Diet

STUDY SUMMARY

Discovery of 13 new genomic regions associated with celiac disease.

YOUR RESULT



STUDY DESCRIPTION

Celiac disease is characterized by an inability to eat gluten, a protein found in wheat and some other types of grain. The disorder is an autoimmune disease, in which the body's own immune system attacks the intestines in the presence of gluten. This can lead to pain, diarrhea, and other digestive problems. This genome-wide study examined over 25,000 individuals of European descent to better understand the genetic underpinnings of susceptibility to celiac disease. The researchers identified 13 novel genetic loci that appear to be linked to the risk of celiac disease. Many of the variants are near genes that play a role in the immune system, especially in the function of T cells, that normally kill cells that are infected by viruses or are cancerous.

DID YOU KNOW?

While a gluten-free diet may sound challenging to adhere to, there are many foods that are naturally gluten-free. For example, grains such as quinoa, oats, and corn don't contain gluten. Other common gluten-free foods are soy, rice, and potato!

YOUR DETAILED RESULTS

To calculate your genetic predisposition to celiac disease we summed up the effects of genetic variants that were linked to celiac disease in the [study that this report is based on](#). These variants can be found in the table below. The variants highlighted in green have **positive effect sizes** and increase your genetic predisposition to celiac disease. The variants highlighted in blue have **negative effect sizes** and decrease your genetic predisposition to celiac disease. Variants that are not highlighted are not found in your genome and do not affect your genetic predisposition to celiac disease. By adding up the effect sizes of the highlighted variants **we calculated your polygenic score for celiac disease to be 1.27**. To determine whether your score is high or low, we compared it to the scores of 5,000 other Nebula Genomics users. We found that your polygenic score for celiac disease is in the **74th percentile**. This means that it is higher than the polygenic scores 74% of people. We consider this to be an **above average genetic predisposition to celiac disease**. However, please note that genetic predispositions do not account for important non-genetic factors like lifestyle. Furthermore, the genetics of most traits has not been fully understood yet and many associations between traits and genetic variants remain unknown. For additional explanations, click on the column titles in the table below and visit our [Nebula Library tutorial](#).

VARIANT [Ⓞ]	YOUR GENOTYPE [Ⓞ]	EFFECT SIZE [Ⓞ]	VARIANT FREQUENCY [Ⓞ]	SIGNIFICANCE [Ⓞ]
rs2187668_T	C / C	1.83 (-)	26%	1.00×10^{-50}
rs1464510_A	A / A	0.25 (↑)	49%	2.98×10^{-40}
rs17810546_G	A / A	0.31 (-)	13%	3.98×10^{-28}
rs13151961_G	A / G	-0.30 (↓)	14%	2.18×10^{-27}
rs653178_C	C / T	0.18 (↑)	50%	7.15×10^{-21}
rs2327832_G	A / G	0.21 (↑)	22%	4.46×10^{-19}
rs2816316_C	A / A	-0.22 (-)	16%	2.20×10^{-17}
rs13098911_T	C / C	0.26 (-)	10%	3.26×10^{-17}
rs11221332_T <small>NEW</small>	C / C	0.19 (-)	24%	5.28×10^{-16}
rs917997_T	C / C	0.17 (-)	24%	1.11×10^{-15}
rs1738074_T	T / T	0.15 (↑)	43%	2.94×10^{-15}
rs802734_G <small>NEW</small>	A / A	0.16 (-)	31%	2.62×10^{-14}
rs13003464_G	A / A	0.14 (-)	40%	3.71×10^{-13}
rs13010713_G	A / A	0.12 (-)	45%	4.74×10^{-11}
rs10903122_A <small>NEW</small>	A / G	-0.12 (↓)	48%	1.73×10^{-10}
rs1893217_G	A / A	0.16 (-)	17%	2.52×10^{-10}
rs10806425_A <small>NEW</small>	A / A	0.12 (↑)	40%	3.89×10^{-10}
rs1250552_G <small>NEW</small>	A / G	-0.12 (↓)	47%	9.09×10^{-10}
rs13314993_G <small>NEW</small>	G / G	0.12 (↑)	46%	3.27×10^{-9}
rs3748816_G <small>NEW</small>	A / A	-0.12 (-)	34%	3.28×10^{-9}
rs9792269_G <small>NEW</small>	A / A	-0.13 (-)	24%	3.28×10^{-9}
rs296547_T <small>NEW</small>	C / C	-0.12 (-)	36%	4.11×10^{-9}
rs4675374_T	C / C	0.13 (-)	22%	5.79×10^{-9}
rs17035378_C <small>NEW</small>	T / T	-0.13 (-)	28%	7.79×10^{-9}
rs11712165_G <small>NEW</small>	T / G	0.12 (↑)	39%	8.03×10^{-9}
rs12928822_T <small>NEW</small>	C / C	-0.15 (-)	16%	3.12×10^{-8}

