

02/2012

## ★ Tuberculosis resistance (Thye, 2012)

Thorsten Thye, et al.  
Nature Genetics

Lungs Infection

### STUDY SUMMARY

Resistance to tuberculosis may be associated with a genetic variant in the WT1 gene.

### STUDY DESCRIPTION

Tuberculosis is a disease caused by a bacteria that usually affects the lungs, although it can also damage other parts of the body. Common symptoms of tuberculosis include coughing up blood, fatigue, and pain in the chest. While it is known some people are resistant to tuberculosis, the genetic variants that may lead to this trait have not been discovered. This study identified a novel genetic variant associated with resistance to tuberculosis. It was discovered in a Ghanaian population of 3,176 individuals and the protective effect was then confirmed for Gambian, Indonesian, and Russian populations. The variant is near WT1, a gene that is involved in the development and function of the kidneys.


### DID YOU KNOW?

The most important part to preventing the spread of tuberculosis is stopping the transmission of the disease. Getting vaccinated, identifying and curing people with the disease, and coughing into your arm or a tissue can help stop the spread of the disease.

### YOUR DETAILED RESULTS

The variants highlighted in green have **positive effect sizes** and increase your genetic predisposition to increased resistance to tuberculosis. The variants highlighted in blue have **negative effect sizes** and decrease your genetic predisposition to increased resistance to tuberculosis. Variants that are not highlighted are not found in your genome and do not affect your genetic predisposition to increased resistance to tuberculosis. 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 <sup>ⓘ</sup>	YOUR GENOTYPE <sup>ⓘ</sup>	EFFECT SIZE <sup>ⓘ</sup>	VARIANT FREQUENCY <sup>ⓘ</sup>	SIGNIFICANCE <sup>ⓘ</sup>
rs2067178_A 	G / A	-0.26 (↓)	17%	2.67 x 10 <sup>-11</sup>