

# Individual genotype influences effectiveness of HIV vaccine

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Almost 40 million people worldwide live with HIV/AIDS. Despite great effort, HIV-1 vaccine development has been challenging. A recent HIV vaccine trial, known as RV144, revealed that a combination of 2 vaccines protected some individuals from HIV infection. Individuals in the trial that made antibodies that bound to a specific region of the HIV envelope protein had a decreased risk of HIV infection.

A new study in the *Journal of Clinical Investigation* reveals that an individual's genotype correlates with their ability to develop immunity to HIV in response to vaccination. Sue Li and colleagues at the Fred Hutchinson Cancer Research Center sequenced genes in RV144 participants that are involved in [antibody production](#). The authors identified single nucleotide variations in genes that encode antibody receptors, which are important for [protective immunity](#).

They found that the majority of individuals with specific variants of the *FCGR2C* gene were protected from HIV infection after vaccination whereas a different form of *FCGR2C* was not associated with protection.

Their study provides important insight into the variable response of individuals in the RV144 trial.

**More information:** FCGR2C polymorphisms associate with HIV-1 vaccine protection in RV144 trial, *J Clin Invest.* [DOI: 10.1172/JCI75539](https://doi.org/10.1172/JCI75539)

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