

Genome Sequencing Standards

The US National Institute of Standards and Technology develops a reference sample to check the validity of genetic sequences.

By Kerry Grens | May 18, 2015

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To create uniformity in the genomic testing industry, the US National Institute of Standards and Technology (NIST) has [created a reference human genome](#) that can be used as a control to ensure that sequencing is done reliably.

“If you send a sample of blood or a tumor [biopsy](#) to different genetic testing laboratories, you can get different results,” Marc Salit, the leader of a genome measurement group at the institute, told [The New York Times](#). “While largely in agreement, they may have significant differences. Now, for the first time, we have a standard to check the

reliability and quality of gene sequencing.”

The reference sample, designed to be used in next-generation sequencing, costs \$450. While available to anyone who would like to purchase it, companies that perform such sequencing are not required to consult the reference. “This gives someone a chance to tell how well their sequencers are working,” NIST representative Michael Newman told [GenomeWeb](#). “The standards are set so if they get the result that we tell them they should be getting, then they know their equipment is working properly and it validates results they’re getting.”

The reference material originates from a Utah woman of European ancestry. According to [GenomeWeb](#), NIST is developing four other reference genomes.