Baseball scouts are agog over Miguel Sano’s hands — strong, supple and deft. But he still had to place them under a bone-scan machine, just in case.

Sano, a shortstop roundly considered the best unsigned prospect from the talent-rich Dominican Republic, twice underwent such a procedure to help assess whether he actually is 16 years old — and not 18 or 19, as his major league suitors routinely suspect. He also provided samples of his blood, urine and feces to Major League Baseball investigators so they could assess his DNA and any possible use of performance-enhancing drugs.

“I did everything they asked me to do so they would have no doubts about my age,” Sano said Monday in a telephone interview from his hometown, San Pedro de Macoris.

Baseball officials declined to answer questions Wednesday about the specifics of Sano’s case or their testing of young players in general.

In a written statement Tuesday, baseball said that it used DNA testing in the Dominican Republic “in very rare instances and only on a consensual basis to deal with the identity fraud problem that the league faces in that country.” The statement added that the results of the tests were not used for any other purpose.

Sano is among the Dominican prospects whose ages are being scrutinized in new ways that some people consider necessary, others consider troubling, and the United States has taken steps to outlaw.

Having invested millions of dollars in players who were later found to have lied about their age, baseball and its teams have turned to analyzing DNA to
help determine whether prospects are falsifying their identity, and bone scans to assess their age range. The league has defended the practice as a way of protecting its teams, but bioethics experts question whether DNA analysis can be abused.

Federal legislation scheduled to take effect in November prohibits companies based in the United States from asking an employee, a potential employee or a family member of an employee for a sample of his or her DNA. It is unclear whether the law would apply when the tests were performed abroad on the citizen of another country.

“I don’t like the sound of this at all,” said Representative Louise M. Slaughter, Democrat of New York, who first proposed the legislation. “I wrote this law specifically to prevent DNA from being used against employees by employers.”

Results of the Sano tests have not yet been released by baseball. If he is determined to be 16, Sano is expected to have at least a half-dozen serious suitors and to receive contract offers of at least $3 million to sign.

In the interview through an interpreter, Sano said that he underwent several tests in the last three months at the request of the Pittsburgh Pirates — one of the teams pursuing him — and then M.L.B. officials. Messages left with Pirates officials Tuesday were not answered.

Sano said he did not object to the tests. He said his sister Patricia, 17, had undergone the bone scan as well to reassure baseball that she was his older sister, and not a younger sibling whose birth certificate was used to falsify Miguel’s age. He said that his biological parents also had provided samples of their DNA to prove that he was their son.

Sano said that he had not paid for any of the tests. Rob Plummer, Sano’s agent, said that he had paid the fee for the bone scan: 1,000 pesos, or about $28.

“Players are being forced to do the DNA testing — what other choice do they have?” Plummer, based in New York, said in a telephone interview. “If they don’t do it, they’re guilty. If you’re clean, you should want to do it.”
He added: “Unfortunately, the players who have taken advantage of the system have created a situation where’s there’s no trust. As a way to get the facts, measures like this might be necessary to have the players be paid what their skill level warrants. Based upon the number of frauds of identity, at least until there’s a system in the Dominican where identities are 100 percent foolproof, it’s necessary.”

Experts in bioethics and forensic science differ on how necessary such testing can be in baseball and elsewhere.

William C. Thompson, a professor of criminology, law and society at the University of California, Irvine, said that as long as baseball used the genetic information solely to determine a player’s identity, the practice was legitimate.

“Genetic testing is troubling because it kind of gives employers a chance to look into the future and to use that to discriminate against people,” Thompson said. “It seems to me that the specific application that M.L.B. is making of this test does not fall under the traditional category of genetic discrimination — where you’re basing a decision of what will happen in the future with medical problems. Here M.L.B. is identifying an individual as who they say they are.”

He added: “I don’t think that even the most ardent of civil libertarians would say that people should be allowed to misrepresent themselves in contractual negotiations.”

But abuses have occurred, according to Jeremy Gruber, the president of the Council for Responsible Genetics, a policy organization that focuses on social, ethical and environmental implications of genetic technologies.

Gruber said that employers had said they were using blood and other bodily fluids for certain examinations and then used them for others.

He cited a case from earlier this decade in which the Burlington Northern Santa Fe Railway used blood samples derived from worker’s compensation exams to genetically test for predisposition to carpal tunnel syndrome.
“There are many instances where employers have acquired information for one reason and used it for another,” Gruber said. “Dominicans who want to come to the United States and play baseball are particularly going to be susceptible to the privacy and discrimination issues as a means to escape being poor.”

Noting that baseball had acknowledged doing the testing and had defended the practice, Gruber added: “We haven’t seen something quite this widespread, as policy, as we are from Major League Baseball. Genetic information has incredible potential to reveal medical information that can be used for a whole spectrum of purposes that can be discriminatory against the individual. For M.L.B. to be doing this with little to no understanding of ramifications is incredibly short-sighted and against basic employment principles.”

Sano said that the bone test, which he likened to an X-ray, had taken about 30 minutes and had been conducted in a local clinic.

Sano and the coach who has overseen his development, Moreno Tejada, both said that it was their understanding that the blood samples had been sent to a laboratory in the United States for analysis.

“I have all of the qualities to play baseball,” Sano said.

*Michael S. Schmidt contributed reporting.*