A Guide to
Paternity Testing

DNAClinics
Accredited DNA Testing

Test Details

During a DNA Paternity test, different genetic locations are analysed along the DNA molecule.

A person possesses two (of many possible) alleles at each location. The alleles are identified by a number. These are inherited from the parents at conception. One comes from the mother and one from the father.

Therefore, when the DNA profiles of biological parents are laid out together, one of the child's alleles (numbers) will match up with a number from the mother's sample and the other should match up with an allele from the father's sample.

If these alleles match at all locations analysed, a person is included as the biological father of the child because it proves they have passed these genetic markers to the child at conception.

Inconsistencies (locations where there is NO match) will exclude a person as a biological father. This is based on the fact that it is only possible to pass on to your offspring the alleles which you possess in your own DNA profile.

Accuracy

>99.9999 probability obtained for inclusion as a biological parent.
This result means that a person is at least 1 million times more likely to be the biological parent of the child tested, than an unrelated individual from the same ethnic group.

The percentage probability reported will differ between cases as the calculation depends on the alleles that are shared between the test participants.

0% probability obtained when excluded as a biological parent.
This result means that there is 0% chance that the person tested is the biological parent of the child.

Inconclusive Results

If your DNA test result has been deemed **INCONCLUSIVE**, it will be due to one or more of the following reasons:

Related Alleged Fathers
If potential fathers are closely related e.g. brothers, a sample will be required from all potential fathers.

If this advice is not followed, it may only be possible to exclude a person as the biological father. An inclusion may be dependent on ruling out the second related party due to the fact that close relatives have more DNA in common than unrelated individuals.

Mutations
Although mutations occur randomly along the DNA molecule, it is extremely rare to find them within the region of DNA analysed in these tests.

The types of DNA mutation referred to here are not harmful, but they will change the form of an allele in some way, therefore changing the number it is identified by. The 'number' now assigned to the related location will form part of that person's DNA profile. However, the number will no longer match the corresponding allele of the biological parent from which it was inherited.

A laboratory must determine whether the inconsistency is due to mutation or whether it is simply a mismatch between the profiles of unrelated individuals.

The laboratory will use the number of inconsistencies found between the DNA profiles analysed and the remaining DNA evidence provided by the test to reach a conclusion. If the laboratory rules that further evidence is required, then the test will be reported as 'Inconclusive'.

Because mutations are so rare, multiple inconsistencies between DNA profiles would not be reported as caused by mutation.

If you require further assistance or have any questions please call:

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