

# The prenatal rhesus test from Eurofins LifeCodexx

In Germany, since 2010, we have developed prenatal genetic tests of the highest quality which allow women to be informed at an early point in their pregnancy and make independent decisions. For this reason, we work closely with gynecologists, prenatal medicine specialists, human geneticists and scientific experts in Germany to provide women concerned with the best possible support.

Our approach is shaped by exceptional compassion, respect, and esteem, especially for expectant mothers and their families, as well as for their treating physicians and the interested public. This is why we strive to provide you with competent and compassionate care at all times.

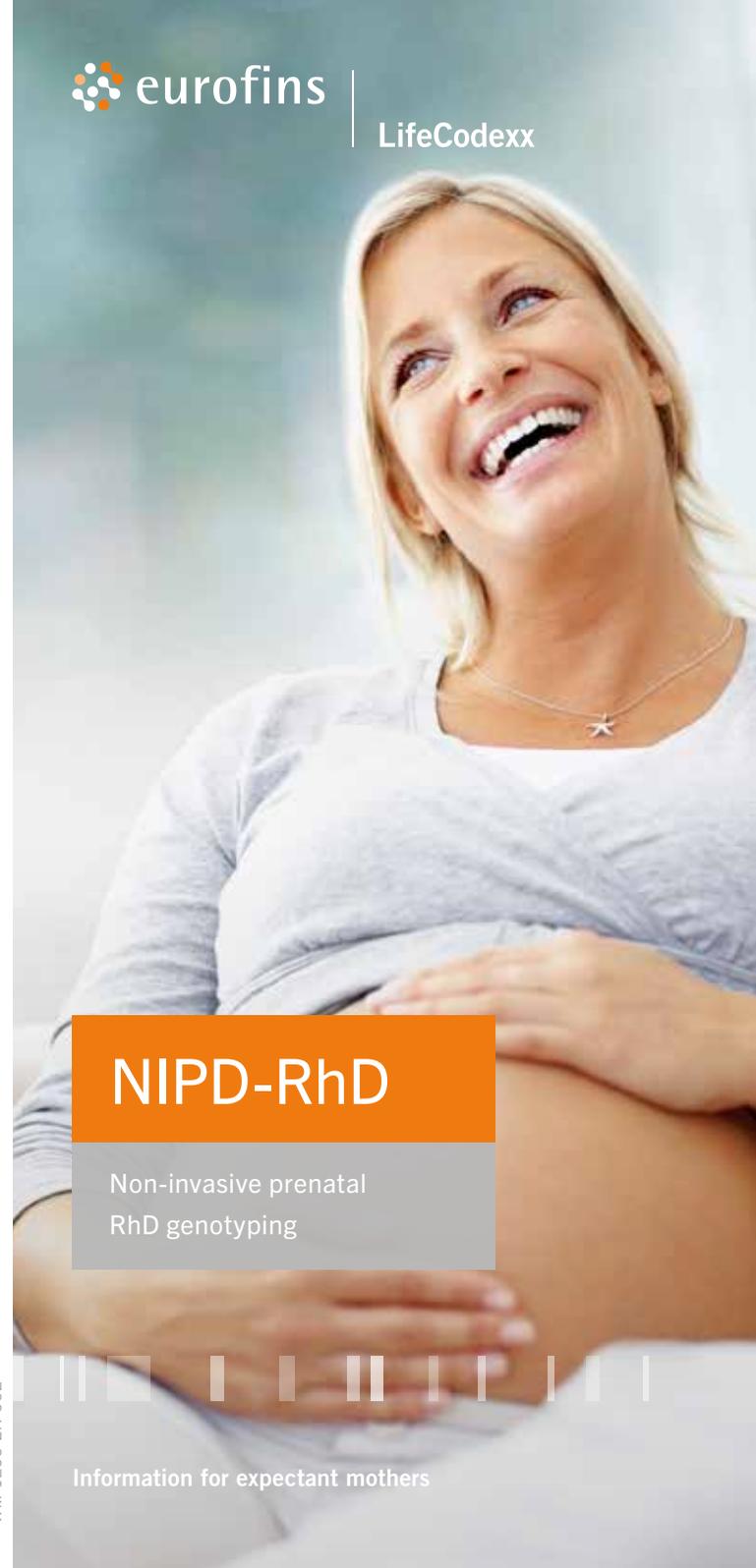
[www.lifecodexx.com](http://www.lifecodexx.com)

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## NIPD-RhD

Non-invasive prenatal  
RhD genotyping

Information for expectant mothers

WIM-1265-EN-002

## Dear expectant mother,

In the next few months, you will be experiencing some touching and exciting moments. Your doctor will provide you with support during this time and inform you about possible prenatal tests. These tests are intended to track your health and the development of your child in order to detect any risks early on.

This brochure contains initial information for you about the NIPD-RhD. It is a prenatal rhesus test which can determine the rhesus factor of your unborn child from your blood. This can be important if you yourself are rhesus-negative. Find out more about the NIPD-RhD by reading the following pages and request a complete explanation and counseling from your doctor.

Take this brochure with you when you speak to your doctor and use this space to write down any questions you would like to ask.

My notes:

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## Significance of the rhesus factor in pregnancy

The rhesus factor is an important blood group characteristic. If a person is rhesus-positive (RhD-positive), he/she has special proteins on the surface of the red blood cells in his/her blood. Conversely, if he/she is rhesus-negative (RhD-negative), these proteins are missing.

At the start of your pregnancy, your doctor determines your rhesus factor (rhesus-positive or rhesus-negative) in addition to your blood group (A, B, AB or O). This is entered into your maternity record. If your blood is rhesus-positive, everything is OK. However, if it is rhesus-negative and your child's blood is rhesus-positive, this can lead to complications. This is due to the fact that, if blood cells from your child enter your bloodstream, your body forms antibodies against these rhesus-positive blood cells. The likelihood that blood from your unborn child is transmitted to you is the greatest towards the end of your pregnancy and during delivery.

This is generally not a problem for your first pregnancy with a rhesus-positive child. The antibodies formed in the first pregnancy do not cause harm to your unborn child. However, your immune system remembers the "recipe" for forming the antibodies – you are sensitized. If you become pregnant once again with a rhesus-positive child, your immune system will form antibodies more abundantly than before. If these antibodies are then transmitted to your child via the placenta, the maternal immune system destroys the child's red blood cells. As a result of this, your child no longer receives a sufficient amount of oxygen. However, oxygen is essential for the healthy development of your child.

By contrast, if your unborn child is rhesus-negative, your immune system does not form any antibodies which could harm your child.



## The prenatal rhesus test

### Precautionary measures for rhesus-negative pregnant women: Anti-D prophylaxis

The immune reaction of the maternal immune system to the unborn, rhesus-positive child is prevented through a corresponding precautionary measure, known as anti-D prophylaxis. To administer it, the doctor injects the pregnant woman with special antibodies (immunoglobulins). These immunoglobulins prevent the formation of maternal antibodies. Nearly all pregnant, rhesus-negative women receive anti-D prophylaxis once around the 28th week of pregnancy and then a second time directly after delivery if the child was determined to be rhesus-positive at this point in time.

### Anti-D prophylaxis only for rhesus-negative pregnant women with a rhesus-positive child?

According to the applicable maternity guidelines in Germany, all rhesus-negative pregnant women should receive anti-D prophylaxis as a precautionary measure. From a medical viewpoint, it is only useful for rhesus-negative pregnant women who are expecting a rhesus-positive child. This is approximately six out of ten rhesus-negative pregnant women. However, this also means that about four out of ten rhesus-negative pregnant women receive anti-D prophylaxis without any medical need, since their unborn child is rhesus-negative. Nowadays, medical professional associations agree that anti-D prophylaxis in rhesus-negative pregnant women with rhesus-negative unborn children is in fact not necessary. The condition is that the child's rhesus factor is determined using a validated test method.

### The prenatal rhesus test from Eurofins LifeCodexx

You can now have the rhesus factor of your unborn child determined using the NIPD-RhD from Eurofins LifeCodexx. If your child is rhesus-negative, you can decide together with your doctor if you wish to forgo the anti-D prophylaxis because, just as with many other drugs, it is not free of possible adverse effects and risks. Please contact your doctor for detailed information and advice.

### Test procedure

After you have received comprehensive information and counseling from your doctor, the blood sample will be drawn starting at the end of the 11th week of pregnancy (week 11 + 0). Your blood sample will be sent to us in Konstanz via courier service. We send your sample to our partner laboratory Eurofins Biomnis (France), where the NIPD-RhD is currently performed for us. The test result will be faxed to your doctor promptly after the laboratory analysis has been completed. He/she will inform you of the result and discuss the next steps with you.

Our partner laboratory Eurofins Biomnis (France) has been performing NIPD-RhD for many years already. A clinically validated medical device is used which has a high level of diagnostic quality and has been approved (CE mark) by an independent testing laboratory acting on behalf of the state.

### Duration and costs of the testing

The test generally takes 10 business days (Monday to Friday, not including holidays). It starts after the blood sample is received in our laboratory and may be prolonged in the event of a duplicate analysis. As a self-pay service, the test cannot be billed to your health insurance program. Medical services such as the blood draw may be additionally billed by your doctor. Please inquire with your doctor ahead of time regarding the total cost incurred.