



مختبر فرايبورج الطبي الشرق الأوسط (ذ.م.م.)  
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## Early Detection of Preeclampsia: sFlt-1 and PIGF

Preeclampsia is one of the most life-threatening medical conditions for mother and baby during the later stages of pregnancy. Clinical symptoms usually can start after the 20<sup>th</sup> week of pregnancy and are mainly hypertonia and proteinuria.

In the past years, a significant link was identified between **preeclampsia** and several angiogenic factors, in particular PIGF (Placental Growth Factor) and its receptor Flt-1 (Fms like tyrosine kinase receptor-1) as well as a circulating soluble form of the receptor, sFlt-1.

In patients with both, early and late onset preeclampsia, significantly elevated levels of Flt and sFlt receptor and lowered levels of PIGF can be detected several weeks before the onset of symptoms. **However, the test has been evaluated only from the 20<sup>th</sup> week of gestation.** Studies show that the maternal serum levels mirror the placental levels and are significantly altered compared to levels in women with uncomplicated pregnancies. Based on these opposing changes of the parameters, a **ratio** was calculated to better distinguish between uncomplicated pregnancies and those with preeclampsia. This ratio of sFlt-1/PIGF gives a more reliable prediction of clinical preeclampsia than just measuring the levels of one protein alone. Its value increases 6-8 weeks before the onset of preeclampsia.

We are now offering a test for the ratio of sFlt-1/PLGF:

- Indication: Suspicion of preeclampsia, elevated blood pressure during pregnancy (systolic >140 mm Hg, diastolic > 90 mm Hg), borderline proteinuria without inflammatory infection, gestosis
- Preanalytic: stability: 8h at 2 - 8°C
- Material: 1 ml serum
- TAT: 3-5 days, test is done in Germany
- Method: ECLIA
- Note: A ratio of 85 or higher indicates the onset of preeclampsia. In cases with suspected preeclampsia but borderline values, the levels should be monitored periodically, maximum every 2 weeks. An increase indicates a worsening of the condition.
- Literature for review: Levine RJ et al. Circulating angiogenic factors and the risk of preeclampsia. N Engl J Med 2004; 350:672–683.

In case of any questions please contact FREIBURG MEDICAL LABORATORY [www.fml-dubai.com](http://www.fml-dubai.com)

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