

# Plasminogen activator inhibitor 1

## General:

Plasminogen activator inhibitor-1 is the principal inhibitor of tissue plasminogen activator (tPA) and urokinase (uPA), the activators of plasminogen and hence fibrinolysis. It is a serine protease inhibitor protein. PAI-1 is mainly produced by the endothelium (cells lining blood vessels), but is also secreted by other tissue types, such as adipose tissue.

The polymorphism 4G/5G, 675 base pairs of the transcription start in the promoter area of the PAI-1 gen is linked with protein expression. Homozygous carriers of the 4G allele show about 25% higher PAI-1 plasma levels than homozygous carriers of the 5G allele. The expression of PAI-1 is regulated additionally by glucose, insulin and VLDL. PAI-1 is associated with the atherogenesis of type 2 in diabetics. Elevated levels of PAI-1 are an independent risk factor for thromboembolia. In addition to the increased risk to develop coronary heart disease the risk for an acute myocardial infarction is increased in carriers of the 4G-allele.

The following tests are available:

- **Plasminogen activator inhibitor 1**

Indication: screening for PAI level, thrombotic risk calculation

Material: 3 ml citrate plasma, **frozen**

TAT: 7-10 days\*

Method: COAG

Units: U/ml

Ref.- range: 0.30 - 3.50

- **Plasminogen activator inhibitor 1, genetic test**

Indication: detection of 4G/5G polymorphism, thrombotic risk calculation

Material: 3 ml EDTA blood

TAT: 2 weeks\*

Method: PCR

For complete list of laboratory test offered at Freiburg Medical Laboratory, please visit <http://www.fml-dubai.com/parameter-listings/>