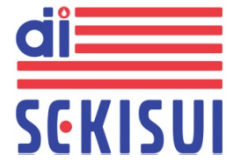


Plasminogen Activator Inhibitor type 2 (PAI-2)



Diagnostic relevance

PAI-2 is a member of the ovalbumin-serpin subfamily (SERPIN clade B subgroup, member no. 2; „SerpB2“) and was originally isolated from human placenta.

PAI-2 is expressed in diverse cell types: e.g. monocytes/ macrophages, eosinophils, keratinocytes, microglia, endothelial cells, epithelial cells.

PAI-2 exists in an intracellular, non-glycosylated form of 47 kDa and a secreted, glycosylated form of about 60 kDa. PAI-2 inhibits uPA and tPA by forming covalent complexes, however it is less effective than PAI-1.

Several functions ranging from a classical serpin to various intracellular roles have been ascribed to PAI-2 and, because none of these have been definitively proven in vivo, its precise role or roles remains an enigma to this day.

Pathophysiology

PAI-2 expression is acutely upregulated in pregnancy, inflammation, infection, and other pathophysiological conditions. Circumstances that prevent PAI-2 upregulation are associated with chronic pathology. Altogether this strongly suggests that PAI-2 is one of the many proteins that maintain homeostasis during damage or stress.

More and more data implicate a role for PAI-2 in many settings, the most recent suggesting it as a modulator of the innate immune response.

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PAI-2©280313

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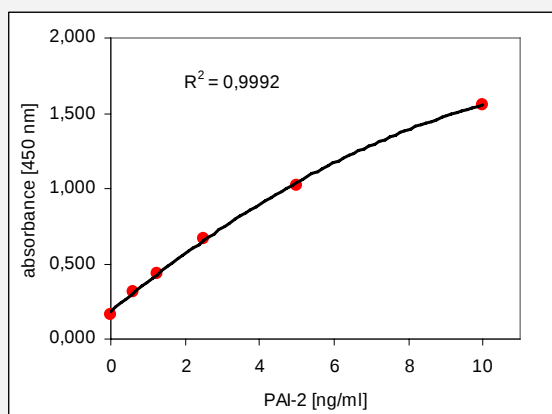


Principle of the assay

Diluted plasma samples are added to microwells coated with a polyclonal antibody against human PAI-2. During an incubation period, PAI-2 present in the sample will bind to the antibody coated to the wells. Following a washing step, a biotinylated monoclonal anti-PAI-2 antibody is added to the microwells and binds to the PAI-2 protein captured on the plate during a short incubation period. A streptavidin-horseradish peroxidase conjugate (SA-HRP) is added to the microwells to complete the formation of the antibody-enzyme detection complex. Following another washing step, the addition of a perborate-3,3'-5,5'-tetramethylbenzidine (TMB) substrate and its subsequent reaction with the HRP present generates a blue colored solution. The reaction is stopped by adding citrate stop solution, which turns the solution color yellow.

Measuring the solution absorbance at 450 nm and extrapolating the value with those of a standard curve determines the level of PAI-2 in the samples.

Standard curve



Key Features

- **Format:** 96-well plate
- **Sample type:** citrated human plasma, tissue extract
- **Sample Volume:** 20 µl (duplicate analysis)
- **Assay Range:** 0 – 10 ng/ml
- **Assay time:** approx. 4 hours
- **Specificity:** Abs specific for PAI-2
- **Precision:** intra-assay: 5.6 - 8.3 %
inter-assay: 7.8 - 14.5 %
- **Values:** Results expressed as:
„PAI-2 conc. [ng/ml]“

REFER TO APPROPRIATE PACKAGE INSERT FOR ADDITIONAL TECHNICAL INFORMATION

Scientific information on PAI-2over

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