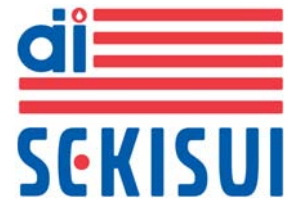


Vitronectin



Description

Human Vitronectin is a major plasma glycoprotein that exhibits multiple activities and functions as a cell adhesion molecule and regulator of coagulation. It contains the amino acid structural motif Arg-Gly-Asp (RGD), which is involved in cell attachment. Human Vitronectin circulates as a single-chain moiety of 75 kDa and a two-chain moiety of 65 kDa and 10 kDa.

Vitronectin belongs to the group of structurally and functionally homologous adhesive proteins (fibrinogen, fibronectin, Von Willebrand factor) that interact with platelets and the vessel wall in the early stages of blood clotting. When coated on surfaces, very low concentrations of Vitronectin promote endothelial cell attachment and induce spreading and migration of cells in a time- and concentration-dependent fashion.

Indication

- Disseminated intra-vascular coagulation
- Coronary atherosclerosis
- Coronary artery disease
- Degenerative liver diseases (e.g. liver cirrhosis)

Pathophysiology

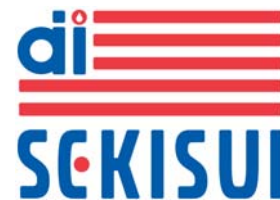
The normal plasma concentration of vitronectin is approximately 200-400 µg/ml. Reduced vitronectin plasma levels (up to 50 %) have been found in several patients suffering from disseminated intravascular coagulation and degenerative liver disease (e.g. liver cirrhosis). Because of its ability to bind platelet glycoproteins and mediate platelet adhesion and aggregation at sites of vascular injury, vitronectin has become an important mediator in the pathogenesis of coronary atherosclerosis. Plasma vitronectin levels in patient with Coronary Artery Disease were found to be significantly higher than in the control group.

References

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Vitronectin ELISA

Product no. ADG803

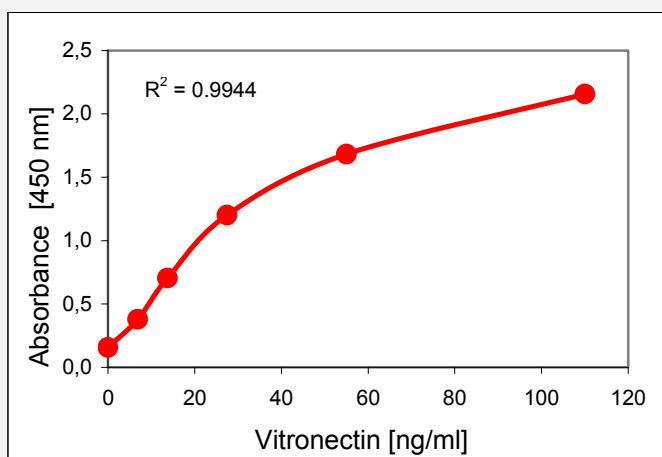


Principle of the assay

The Vitronectin (VN) ELISA is a "sandwich" ELISA employing a monoclonal and a polyclonal antibody specific for human Vitronectin.

Diluted plasma samples are added to microwells coated with the monoclonal antibody against Vitronectin. During an incubation period, Vitronectin present in the sample will bind to the antibody coated to the wells. Following a washing step, a horseradish peroxidase (HRP) conjugated rabbit anti-Vitronectin polyclonal antibody is added to the microwells and binds to the Vitronectin protein captured on the plate during a short incubation period. Following another washing step, the addition of a TMB substrate and its subsequent reaction with the HRP present generates a blue colored solution. The reaction is stopped by the adding sulfuric acid, 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 Vitronectin in the diluted plasma sample.

Standard curve



Related products

- monoclonal anti-human VN antibodies
- polyclonal anti-human VN antibodies

Key Features

- **Format:** 96-well plate
- **Sample type:** human citrated plasma
- **Sample Volume:** less than 1 µl to perform a duplicate analysis
- **Assay Range:** 0 – 100 ng/ml
- **For research use only!**

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