



RPES8536

Product Information

Product SKU:	RPES8536	Expression Host:	Mammalian	Size:	20µg
Tag:	C-His	Reactivity:	Rat	Accession:	P20961

Additional Information

Calculated MW:	44.1 kDa	Observed MW:	40-50 kDa
Sequence:	Met1-Pro402		

Protein Information

Background: Plasminogen activator inhibitor 1, also known as PAI-1, Endothelial plasminogen activator inhibitor, SerpinE1 and PLANH1, is a secreted glycoprotein that belongs to the serpin family. SerpinE1 is the primary physiological inhibitor of the two plasminogen activators urokinase (uPA) and tissue plasminogen activator (tPA). Its rapid interaction with TPA may function as a major control point in the regulation of fibrinolysis. Defects in SerpinE1 are the cause of plasminogen activator inhibitor-1 deficiency (PAI-1 deficiency) which is characterized by abnormal bleeding due to SerpinE1 defect in the plasma. High concentrations of SerpinE1 have been associated with thrombophilia which is an autosomal dominant disorder in which affected individuals are prone to develop serious spontaneous thrombosis. Studies of PAI-1 have contributed significantly to the elucidation of the protease inhibitory mechanism of serpins, which is based on a metastable native state becoming stabilised by insertion of the RCL into the central beta-sheet A and formation of covalent complexes with target proteases. Greater expression of PAI-1 has been associated with increased survival of cells and resistance to apoptosis. PAI-1 appears to influence apoptosis by decreasing cell adhesion (anoikis) as well as its effect on intracellular signaling. PAI-1, in its active state, also binds to the extracellular protein vitronectin. When in complex with its target proteases, it binds with high affinity to endocytosis receptors of the low density receptor family. The mechanisms of PAI-1

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overexpression during obesity are complex, and it is conceivable that several inducers are involved at the same time at several sites of synthesis. PAI-1 is also implicated in adipose tissue development. It suggests that PAI-1 inhibitors serve in the control of atherothrombosis.

Synonyms:	Plasminogen activator inhibitor, PLANH, SERPINE, Serpin E, Mr1, PAI, PAI-1, SERPINE1, PLANH1, Plasminogen activator inhibitor 1, Endothelial plasminogen activator inhibitor, Serpin E1, Pai1, Endothelial plasminogen activator inhibitor, PAI-1, PLANH1, Serpin E1, SERPINE1
Endotoxin:	< 1.0 EU/mg of the protein as determined by the LAL method
Formulation:	Lyophilized from a 0.2 µm filtered solution in PBS with 5% Trehalose and 5% Mannitol.
Purity:	> 90% as determined by reducing SDS-PAGE.
Bio-Activity:	Not validated for activity
Storage:	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.