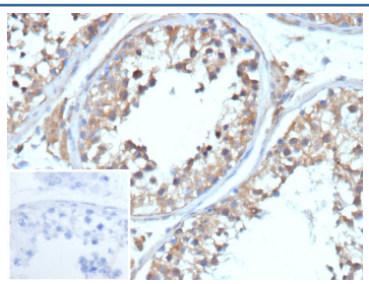
SERPINE1 Antibody / Serpin family E member 1 / PAI-1 [clone rTJA6] (V5962)

Catalog No.	Formulation	Size
V5962-100UG	0.2 mg/ml in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V5962-20UG	0.2 mg/ml in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug
V5962SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

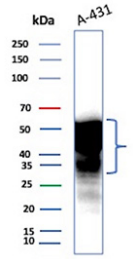
Recombinant | MOUSE MONOCLONAL

Bulk quote request

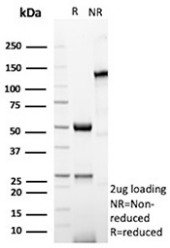
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG2b, kappa
Clone Name	rTJA6
UniProt	P05121
Localization	Secreted
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml Western Blot : 2-4ug/ml
Limitations	This SERPINE1/Serpin family E member 1 antibody is available for research use only.



Immunohistochemistry analysis of SERPINE1 / PAI-1 antibody in human testis. Formalin-fixed, paraffin-embedded human testis tissue was stained with SERPINE1 / PAI-1 antibody (clone rTJA6). HRP-DAB brown chromogenic signal is observed predominantly in the cytoplasm of seminiferous tubule-associated cells, with staining localized to germ cells and surrounding supporting cells, while nuclei are counterstained blue. The staining pattern is consistent with cytoplasmic localization of Serpin family E member 1 in testicular tissue. The inset image shows PBS used instead of primary antibody, demonstrating absence of specific HRP-DAB brown staining and confirming staining specificity. Heat-induced epitope retrieval was performed in 10 mM Tris with 1 mM EDTA, pH 9.0, for 45 minutes at 95oC followed by cooling at room temperature for 20 minutes prior to antibody incubation.



Application of SERPINE1 / PAI-1 antibody in western blot. Western blot analysis of SERPINE1 / PAI-1 antibody (clone rTJA6) was performed using human A-431 whole cell lysate. A strong immunoreactive band is observed at approximately 45 kDa, consistent with the predicted molecular weight of Serpin family E member 1. The detected signal aligns with the predicted molecular weight under reducing conditions. PAI-1 is a secreted serpin that can exist in active and latent conformations, and the slightly broadened appearance of the band likely reflects conformational states or differences in glycosylation rather than non-specific binding. The blot demonstrates specific detection of endogenous SERPINE1 in human A-431 cells at its predicted molecular weight.



SDS-PAGE Analysis of Purified SERPINE1/Serpin family E member 1 antibody (rTJA6). Confirmation of Purity and Integrity of Antibody.

Description

SERPINE1 antibody, also known as Serpin family E member 1 antibody, recognizes a secreted serine protease inhibitor commonly referred to as Plasminogen activator inhibitor 1 and PAI-1. Serpin family E member 1 is encoded by the SERPINE1 gene located on chromosome 7q22.1 and belongs to the serpin superfamily of protease inhibitors. The protein is primarily localized to the extracellular space and circulating plasma, where it regulates fibrinolysis by inhibiting tissue-type plasminogen activator and urokinase-type plasminogen activator. SERPINE1 is highly expressed in endothelial cells, adipocytes, hepatocytes, platelets, smooth muscle cells, and various tumor cells, with expression induced by inflammatory cytokines, hypoxia, and metabolic stress.

Serpin family E member 1 functions as the principal physiological inhibitor of plasminogen activation, thereby limiting plasmin formation and stabilizing fibrin clots. Through this activity, it plays a central role in thrombosis, wound healing, extracellular matrix remodeling, and vascular homeostasis. SERPINE1 antibody is widely used to investigate coagulation biology, tissue repair mechanisms, and tumor microenvironment dynamics. Beyond its antifibrinolytic function, SERPINE1 interacts with vitronectin and components of the urokinase receptor system to influence cell adhesion, migration, angiogenesis, and tumor invasion.

Structurally, Serpin family E member 1 contains a conserved reactive center loop typical of serpin proteins, enabling the formation of stable inhibitory complexes with target proteases. The protein exists in active, latent, and cleaved conformations, each associated with distinct biological properties. Binding to vitronectin stabilizes the active conformation and prolongs its functional half-life in circulation. Within tissues, SERPINE1 localizes to the pericellular matrix and extracellular compartment, frequently co-localizing with integrins and the plasminogen activation system during dynamic remodeling events.

Dysregulated SERPINE1 expression is associated with numerous pathological conditions. Elevated levels are linked to deep vein thrombosis, myocardial infarction, atherosclerosis, and other cardiovascular disorders characterized by impaired fibrinolysis. Increased expression is also observed in obesity and type 2 diabetes, contributing to metabolic and vascular complications. In cancer, high SERPINE1 expression correlates with poor prognosis in malignancies such as breast, lung, and colorectal cancers, where it supports tumor cell survival, invasion, and resistance to apoptosis.

SERPINE1 antibody supports research into TGF-beta signaling, hypoxia-inducible factor pathways, and inflammatory cytokine networks that regulate SERPINE1 transcription. Developmentally, expression increases during tissue repair and inflammatory responses, highlighting its role in controlled matrix turnover. Clone rTJA6 recognizes Serpin family E member 1 and is suitable for detecting SERPINE1 expression in relevant research applications.

Application Notes

1. Optimal dilution of the SERPINE1/Serpin family E member 1 antibody should be determined by the researcher.

2. This SERPINE1/Serpin family E member 1 antibody is recombinantly produced by expression in CHO cells.

Immunogen

Prokaryotic recombinant protein corresponding to a 250 amino acid portion of the N-terminus of the human PAI-1 molecule was used as the immunogen for the SERPINE1/Serpin family E member 1 antibody.

Storage

SERPINE1/Serpin family E member 1 antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.