10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Urokinase (PLAU) Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8161a

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	P00749
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	48523
Antigen Region	60-90

Additional Information

Gene ID	5328
Other Names	Urokinase-type plasminogen activator, U-plasminogen activator, uPA, Urokinase-type plasminogen activator long chain A, Urokinase-type plasminogen activator short chain A, Urokinase-type plasminogen activator chain B, PLAU
Target/Specificity	This Urokinase (PLAU) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 60-90 amino acids from the N-terminal region of human Urokinase (PLAU).
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Urokinase (PLAU) Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PLAU (HGNC:9052)
Function	Serine protease that cleaves the inactive precursor plasminogen at a specific Arg-Val peptide bond, converting it into active plasmin

	(PubMed:1969415, PubMed:2521625, PubMed:4270330). Secreted as an inactive zymogen, it is recruited and activated at the cell surface through interaction with the urokinase plasminogen activator receptor (uPAR). Cell-surface activation enables localized, plasmin-dependent pericellular proteolysis, regulating extracellular matrix degradation in cell migration and tissue remodeling (PubMed:1829461, PubMed:2521625, PubMed:28849762). Also contributes to fibrinolysis and blood clot clearance by promoting plasmin generation (By similarity).
Cellular Location	Secreted. Note=Secreted as an inactive zymogen, it is activated through specific proteolytic cleavage.
Tissue Location	Expressed in the prostate gland and prostate cancers.

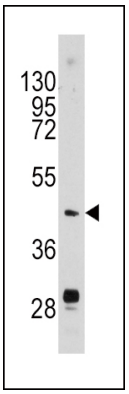
Background

PLAU, a member of the peptidase family S1, is a potent plasminogen activator and is clinically used for therapy of thrombolytic disorders. PLAU specifically cleaves the Arg-|-Val bond in plasminogen to form plasmin. The protein is found in high and low molecular mass forms. Each consists of two chains, A and B. The high molecular mass form contains a long chain A. Cleavage occurs after residue 155 in the low molecular mass form to yield a short A1 chain. The protein is used in Pulmonary Embolism (PE) to initiates fibrinolysis. Structurally, PLAU contains 1 EGF-like domain and 1 kringle domain.

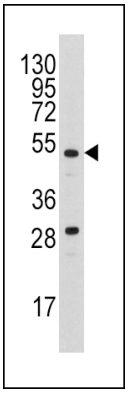
References

Strausberg, R.L., et al., Proc. Natl. Acad. Sci. U.S.A. 99(26):16899-16903 (2002). Sperl, S., et al., Proc. Natl. Acad. Sci. U.S.A. 97(10):5113-5118 (2000). Turkmen, B., et al., Electrophoresis 18(5):686-689 (1997). Conne, B., et al., Thromb. Haemost. 77(3):434-435 (1997). Yoshimoto, M., et al., Biochim. Biophys. Acta 1293(1):83-89 (1996).

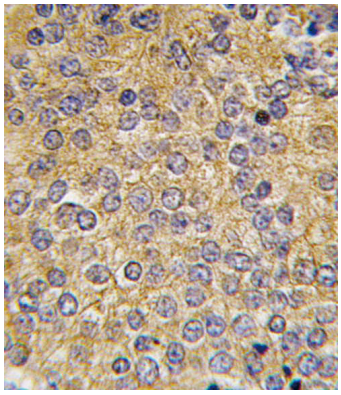
Images



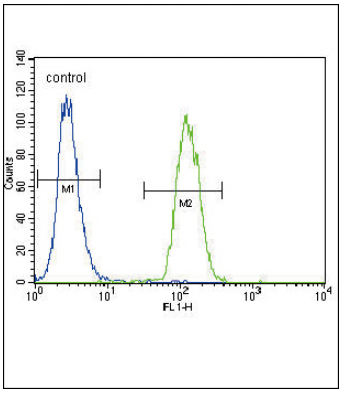
Western blot analysis of anti-PLAU Antibody (N-term) (Cat.#AP8161a) in mouse brain tissue lysates (35ug/lane). PLAU (arrow) was detected using the purified Pab.



Western blot analysis of anti-PLAU Antibody (N-term) (Cat.#AP8161a) in A2058 cell line lysates (35ug/lane). PLAU (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human prostata carcinoma tissue reacted with PLAU antibody (N-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Urokinase (PLAU) Antibody (N-term) (Cat. #AP8161a) flow cytometric analysis of A2058 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Citations

- Suppression of tumor growth in H-ras12V liver cancer mice by delivery of programmed cell death protein 4 using galactosylated poly(ethylene glycol)-chitosan-graft-spermine.
- In vivo suppression of vein graft disease by nonviral, electroporation-mediated, gene transfer of tissue inhibitor of metalloproteinase-1 linked to the amino terminal fragment of urokinase (TIMP-1.ATF), a cell-surface directed matrix metalloproteinase inh
- A gene expression signature that distinguishes desmoid tumours from nodular fasciitis.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.