SunLong Biotech Co.,LTD
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[Primary Antibody]

Rabbit Anti-TPA antibody

Catalog Number: SL1545R

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	TPA
Immunogen:	KLH conjugated synthetic peptide derived from human Tissue-type plasminogen activator chain B: 485-562/562
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Applications:	WB=1:500-2000 IHC-P=1:100-500 IHC-F=1:100-500 IF=1:100-500 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Human,Mouse,Rat(predicted:Pig,Cow,Horse,Rabbit)
Predicted MW.:	28/58kDa
Subcellular Location:	Secretory protein
Background:	This gene encodes tissue-type plasminogen activator, a secreted serine protease which converts the proenzyme plasminogen to plasmin, a fibrinolytic enzyme. Tissue-type plasminogen activator is synthesized as a single chain which is cleaved by plasmin to a two chain disulfide linked protein. This enzyme plays a role in cell migration and tissue remodeling. Increased enzymatic activity causes hyperfibrinolysis, which manifests as excessive bleeding; decreased activity leads to hypofibrinolysis which can result in thrombosis or embolism. Alternative splicing of this gene results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Jul 2008]. **Function:** Converts the abundant, but inactive, zymogen plasminogen to

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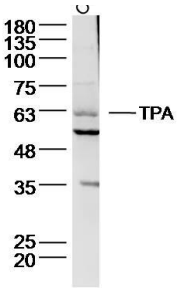
	plasmin by hydrolyzing a single Arg-Val bond in plasminogen. By controlling plasmin-mediated proteolysis, it plays an important role in tissue remodeling and degradation, in cell migration and many other physiopathological events. Plays a direct role in facilitating neuronal migration. **Subunit:** Heterodimer of chain A and chain B held by a disulfide bond. Forms a heterodimer with SERPINA5. Binds to fibrin with high affinity. This interaction leads to an increase in the catalytic efficiency of the enzyme between 100-fold and 1000-fold, due to an increase in affinity for plasminogen. Similarly, binding to heparin increases the activation of plasminogen. Binds to annexin A2, cytokeratin-8, fibronectin and laminin. Binds to mannose receptor and the low-density lipoprotein receptor-related protein (LRP1); these proteins are involved in TPA clearance. Yet unidentified interactions on endothelial cells and vascular smooth muscle cells (VSMC) lead to a 100-fold stimulation of plasminogen activation. In addition, binding to VSMC reduces TPA inhibition by PAI-1 by 30-fold. Binds LRP1B; binding is followed by internalization and degradation. **Subcellular Location:** Secreted. **Tissue Specificity:** Synthesized in numerous tissues (including tumors) and secreted into most extracellular body fluids, such as plasma, uterine fluid, saliva, gingival crevicular fluid, tears, seminal fluid, and milk. **Post-translational modifications:** The single chain, almost fully active enzyme, can be further processed into a two-chain fully active form by a cleavage after Arg-310 catalyzed by plasmin, tissue kallikrein or factor Xa. Differential cell-specific N-linked glycosylation gives rise to two glycoforms, type I (glycosylated at Asn-219) and type II (not glycosylated at Asn-219). The single chain type I glycoform is less readily converted into the two-chain form by plasmin, and the two-chain type I glycoform has a lower activity than the two-chain type II glycoform in the presence of fibrin. N-glycosylation of Asn-152; the bound oligomannosidic glycan is involved in the interaction with the mannose receptor. Characterization of O-linked glycan was studied in Bowes melanoma cell line. DISEASE: Note=Increased activity of TPA results in increased fibrinolysis of fibrin blood clots that is associated with excessive bleeding. Defective release of TPA results in hypofibrinolysis that can lead to thrombosis or embolism. **Similarity:** Belongs to the peptidase S1 family. Contains 1 EGF-like domain. Contains 1 fibronectin type-I domain. Contains 2 kringle domains. Contains 1 peptidase S1 domain. **Database links:**

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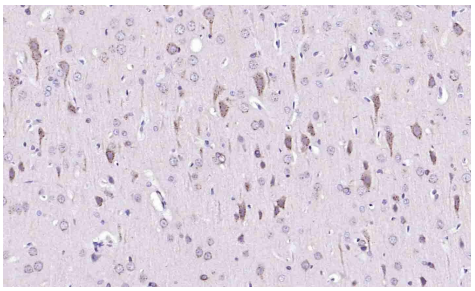
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	Entrez Gene: 5327 Human Omim: 173370 Human **SwissProt:** P00750 Human **Unigene:** 491582 Human Tissue-type plasminogen activator tPA is a member of the serine protease family, and its main biological function is to activate plasminogen into plasmin. In recent years, studies have shown that t-PA not only participates in the thrombolytic process of the circulatory system, but also plays an important role in the nervous system; t-PA is involved in the occurrence and development of neurological diseases such as epilepsy and presenile dementia, and also plays an important role in physiological processes such as learning and memory.

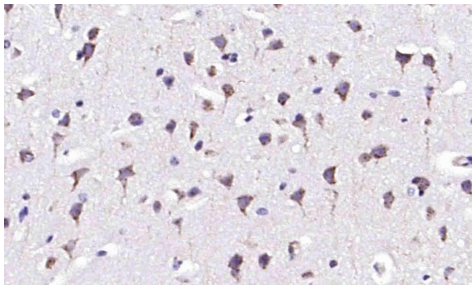
[VALIDATION IMAGES]



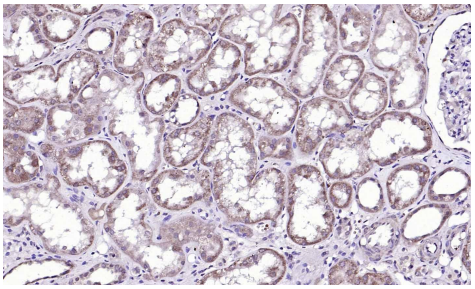
Sample:
Ovary (Mouse) Lysate at 40 ug
Primary: Anti-TPA (SL1545R) at 1/300 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 62 kD
Observed band size: 62 kD



Paraformaldehyde-fixed, paraffin embedded (rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (TPA) Polyclonal Antibody, Unconjugated (SL1545R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.



Paraformaldehyde-fixed, paraffin embedded (mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (TPA) Polyclonal Antibody, Unconjugated (SL1545R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.



Paraformaldehyde-fixed, paraffin embedded (Human kidney); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (TPA) Polyclonal Antibody, Unconjugated (SL1545R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

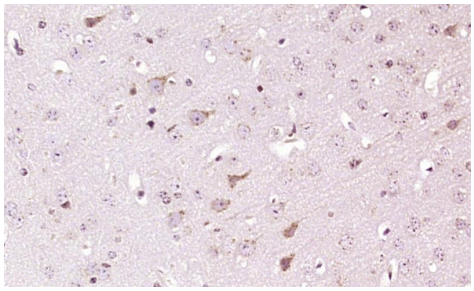
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Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (TPA) Polyclonal Antibody, Unconjugated (SL1545R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

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