

Anti-Human tPA Antibody [PSH13-11] - BSA and Azide free (Detector)

HA725116



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Det)
Clone number:	PSH13-11

Description: Tissue-type plasminogen activator, short name tPA, is a protein that facilitates the breakdown of blood clots. It acts as an enzyme to convert plasminogen into its active form plasmin, the major enzyme responsible for clot breakdown. It is a serine protease (EC 3.4.21.68) found on endothelial cells lining the blood vessels. Human tPA is encoded by the PLAT gene, and has a molecular weight of ~70 kDa in the single-chain form. tPA can be manufactured using recombinant biotechnology techniques, producing types of recombinant tissue plasminogen activator (rtPA) such as alteplase, reteplase, and tenecteplase. These drugs are used in clinical medicine to treat embolic or thrombotic stroke, but they are contraindicated and dangerous in cases of hemorrhagic stroke and head trauma. The antidote for tPA in case of toxicity is aminocaproic acid.

Immunogen: Recombinant protein within Human tPA aa 36-562 (HA211026).

Positive control: Recombinant Human tPA protein (HA211026).

Subcellular location: Secreted, extracellular space.

Database links: SwissProt: P00750 Human

Recommended Dilutions:

ELISA(Det) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH13-10] to Human tPA antibody (Capture) (HA725115) and Recombinant Human tPA protein (HA211026) as the standard. The reference range value is 39.1-5,000 pg/mL.

Storage Buffer: 1*PBS (pH7.4).

Storage Instruction: Store at +4°C after thawing. Aliquot store at -20°C. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

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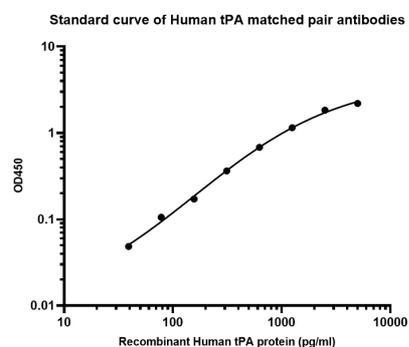
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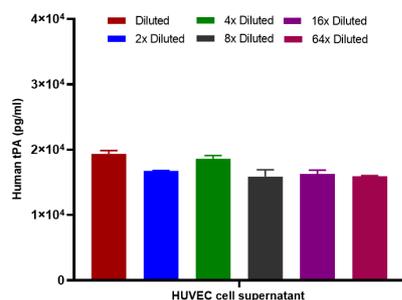
Fig1: Sandwich ELISA analysis of Human tPA matched pair antibodies

Capture: HA725115, Human tPA Rabbit mAb [PSH13-10]

Detector: HA725116, Human tPA Rabbit mAb [PSH13-11]



Elisa assay was performed by coating wells of a 96-well plate with 100 μ l per well of capture antibody (HA725115) diluted in carbonate/bicarbonate buffer, at a concentration of 5 μ g/mL overnight at 4°C. Wells of the plate were washed, blocked with 150 μ l 0.05% tween-20 1% BSA blocking buffer, and incubated with serial diluted Recombinant Human tPA protein (HA211026) starting from 5,000 pg/ml to 0 pg/ml and detect antibody (HA725116, Biotin, 0.2 μ g/ml) for 1 hour at 30°C with shaking. Then the plate was washed and incubated with 100 μ l per well of SA-HRP for 0.5 hour at 30°C with shaking. Detection was performed using an Ultra TMB Substrate for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

**Fig2:** Interpolated concentrations of native tPA in HUVEC cell supernatant

Capture: HA725115, Human tPA Rabbit mAb [PSH13-10]

Detector: HA725116, Human tPA Rabbit mAb [PSH13-11]

Interpolated concentration of native tPA was measured in duplicate at different sample concentrations. The interpolated dilution factor corrected values were plotted (mean \pm SD, n=2). The mean tPA concentration was determined to be 17124 pg/mL in HUVEC cell culture supernatant.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Wang R et al. Neutrophil extracellular traps promote tPA-induced brain hemorrhage via cGAS in mice with stroke. *Blood*. 2021 Jul
2. Cai Y et al. FUNDC1-dependent mitophagy induced by tPA protects neurons against cerebral ischemia-reperfusion injury. *Redox Biol*. 2021 Jan

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