Human Serpin E1/PAI-1 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1786

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Serpin E1/PAI-1 in direct ELISAs and Western blots. In direct ELISAs, approximately 20% cross-reactivity with recombinant mouse Serpin E1 is observed and less than 2% cross-reactivity with recombinant human (rh) Serpin A1, rhSerpin A3, rhSerpin A4, rhSerpin A5, rhSerpin C1, rhSerpin F2, and rhSerpin F1/PEDF is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant human Serpin E1/PAI-1 Gly21-Pro402 Accession # P05121
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

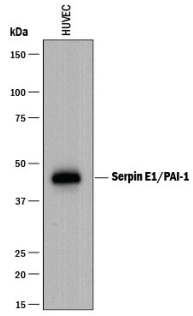
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human Serpin E1/PAI-1 (Catalog # 1786-PI), see our available Western blot detection antibodies
Simple Western	2.5 µg/mL	See Below
Neutralization	Measured by its ability to neutralize Recombinant Human Serpin E1 (1.35 µg/mL, Catalog # 1786-PI) inhibition of Recombinant Human u-Plasminogen Activator (uPA)/Urokinase (0.1 µg/mL, Catalog # 1310-SE) cleavage of the fluorogenic peptide substrate Z-GGR-AMC (100 µM). The Neutralization Dose (ND_{50}) is typically 10 µg/mL.	

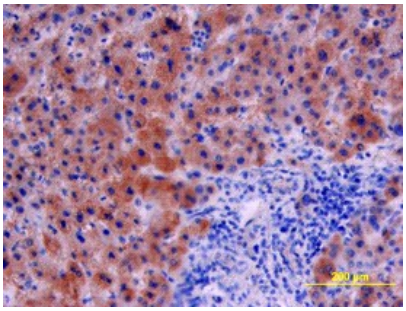
DATA

Western Blot



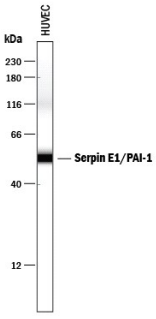
Detection of Human Serpin E1/PAI-1 by Western Blot. Western blot shows lysates of HUVEC human umbilical vein endothelial cells. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human Serpin E1/PAI-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1786) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for Serpin E1/PAI-1 at approximately 45 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



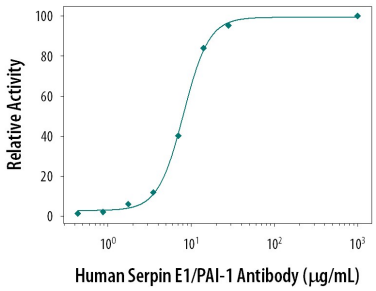
Serpin E1/PAI-1 in Human Liver Cancer Tissue. Serpin E1/PAI-1 was detected in immersion fixed paraffin-embedded sections of human liver cancer tissue using Goat Anti-Human Serpin E1/PAI-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1786) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

Simple Western



Detection of Human Serpin E1/PAI-1 by Simple Western™. Simple Western lane view shows lysates of HUVEC human umbilical vein endothelial cells, loaded at 0.2 mg/mL. A specific band was detected for Serpin E1/PAI-1 at approximately 54 kDa (as indicated) using 2.5 µg/mL of Goat Anti-Human Serpin E1/PAI-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1786) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

Neutralization



Neutralization of Serpin E1/PAI-1 Activity by Human Serpin E1/PAI-1 Antibody. Recombinant Human u-Plasminogen Activator (uPA)/Urokinase (0.1 µg/mL, Catalog # 1310-SE) activity is measured in the presence of Recombinant Human Serpin E1 (1.35 µg/mL, Catalog # 1786-PI) that has been preincubated with increasing concentrations of Goat Anti-Human Serpin E1/PAI-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1786). The ND_{50} is typically 10 µg/mL.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956

Human Serpin E1/PAI-1 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1786

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

As a member of the Serpin superfamily of serine protease inhibitors, Serpin E1/PAI-1 is the principal inhibitor of urokinase-type plasminogen activator (uPA) and tissue-type PA (1, 2). As important regulators of extracellular matrix remodeling, uPA and PAI-1 play a major role in many processes such as angiogenesis, tumor invasion and obesity (2-4). For example, uPA and PAI-1 are the only tumor prognostic factors validated at the highest level of evidence with regard to their clinical utility in breast cancer (5). The human PAI-1 is initially synthesized as 402 amino acid precursor with a N-terminal signal peptide (6, 7). PAI-1 may exist in one of two possible conformations, designated as active or latent (8). The purified recombinant human (rh) PAI-1 is active against rhuPA. The heterogeneity at the N-terminus of the purified rhPAI-1 has been observed before for both the recombinant and native proteins (9).

References:

1. Silverman, G.A. *et al.* (2001) J. Biol. Chem. **276**:33293.
2. Stefansson, S. *et al.* (2003) Curr. Pharm. Des. **9**:1545.
3. Duffy, M.J. (2002) Clin. Chem. **48**:1194.
4. Juhan-Vague, I. *et al.* (2003) J. Thromb. Haemost. **1**:1575.
5. Harbeck, N. *et al.* (2002) Clin. Breast Cancer **3**:196.
6. Pannekoek, H. *et al.* (1986) EMBO J. **5**:2539.
7. Ginsburg, D. *et al.* (1986) J. Clin. Invest. **78**:1673.
8. Wang, Z. *et al.* (1996) Biochemistry **35**:16443.
9. Stromqvist, M. *et al.* (1994) Protein Expr. Purif. **5**:309.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956