Human Serpin E1/PAI-1 Antibody

Monoclonal Mouse IgG_1 Clone # 242816

Catalog Number: MAB1786

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Serpin E1 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human Serpin A1, A3, A4, A8, C1, F1, F2, I1, I2, recombinant mouse Serpin D1 or E2 is observed.
Source	Monoclonal Mouse IgG_1 Clone # 242816
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant human Serpin E1/PAI-1 Met1-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 either lyophilized or as a 0.2 μm filtered solution in PBS.

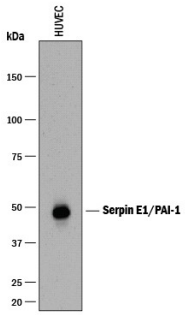
APPLICATIONS

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
Simple Western	2.5 µg/mL	See Below
Human Serpin E1/PAI-1 Sandwich Immunoassay		**Reagent**
ELISA Capture	2-8 µg/mL	Human Serpin E1/PAI-1 Antibody (Catalog # MAB1786)
ELISA Detection	0.1-0.4 µg/mL	Human Serpin E1/PAI-1 Biotinylated Antibody (Catalog # BAF1786)
Standard		Recombinant Human Serpin E1/PAI-1 (Catalog # 1786-PI)
Neutralization	Measured by its ability to neutralize Recombinant Human Serpin E1/PAI-1 (0.25 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 0.3 µg/mL.	

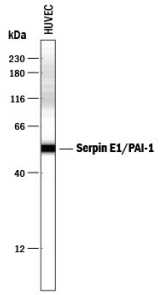
DATA

Western Blot



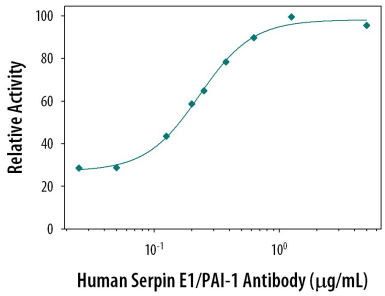
Detection of Human Serpin E1/PAI-1 by Western Blot. Western blot shows lysates of HUVEC human umbilical vein endothelial cells. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human Serpin E1/PAI-1 Monoclonal Antibody (Catalog # MAB1786) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for Serpin E1/PAI-1 at approximately 48 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

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 Mouse Anti-Human Serpin E1/PAI-1 Monoclonal Antibody (Catalog # MAB1786) . 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/PAI-1 (0.25 µg/mL, Catalog # 1786-PI) that has been preincubated with increasing concentrations of Mouse Anti-Human Serpin E1/PAI-1 Monoclonal Antibody (Catalog # MAB1786). The ND_{50} is typically 0.3 µg/mL.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

Human Serpin E1/PAI-1 Antibody

Monoclonal Mouse IgG_1 Clone # 242816

Catalog Number: MAB1786

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 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 rhPAI-1 is active against rhuPA. The heterogeneity at the N-terminus of the purified recombinant human PAI-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®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 **Canada** TEL 855 668 8722 **China** TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449