

#11907 Store at -20C

PAI-1 (D9C4) Rabbit mAb**Cell Signaling**
TECHNOLOGY®**Orders:** 877-616-CELL (2355)
orders@cellsignal.com**Support:** 877-678-TECH (8324)**Web:** info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

| Applications: | Reactivity: | Sensitivity: | MW (kDa): | Source/Isotype: | UniProt ID: | Entrez-Gene Id: |
|---------------|-------------|--------------|-----------|-----------------|-------------|-----------------|
| WB | H Mk B | Endogenous | 48 | Rabbit IgG | #P05121 | 5054 |

Product Usage Information**Application**

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity / Sensitivity

PAI-1 (D9C4) Rabbit mAb recognizes endogenous levels of total PAI-1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Arg294 of human PAI-1 protein.

Background

PAI-1 is a secreted protein that belongs to the serine proteinase inhibitor (serpin) superfamily. It inhibits urokinase and tissue plasminogen activators (uPA and tPA) and thus, reduces the conversion of inactive plasminogen to plasmin (1). PAI-1 regulates fibrinolysis and plays an important role in vessel patency and tissue remodeling. Secreted PAI-1 interacts with the extracellular matrix (ECM) component vitronectin, thereby modulating cell-ECM interactions (2,3). PAI-1 is expressed in a variety of tissues with higher expression in liver, vascular endothelial cells, platelets, macrophages, and adipose tissue (1). Increased levels of PAI-1 are associated with deep vein thrombosis (4). Defects in PAI-1 cause plasminogen activator inhibitor-1 deficiency (PAI-1D), which is characterized by increased bleeding after injury or surgery (5). Research studies have shown that high levels of PAI-1 are associated with obesity, aging, insulin resistance, and type 2 diabetes (6-8). PAI-1 is transcriptionally regulated by TGF-β and mediates TGF-β-induced inhibition of cell migration and invasion in cancer cells (9). Studies have also shown PAI-1 to be involved in fibrosis (10).

Background References

1. Pannekoek, H. et al. (1986) *EMBO J* 5, 2539-44.
2. Sigurdardottir, O. and Wiman, B. (1994) *Biochim Biophys Acta* 1208, 104-10.
3. Konstantinides, S. et al. (2001) *Circulation* 103, 576-83.
4. Baldwin, J.F. et al. (2012) *J Vasc Surg* 56, 1089-97.
5. Fay, W.P. et al. (1997) *Blood* 90, 204-8.
6. Pannacciulli, N. et al. (2002) *Obes Res* 10, 717-25.
7. Juhan-Vague, I. et al. (1991) *Diabetologia* 34, 457-62.
8. Hashimoto, Y. et al. (1987) *Thromb Res* 46, 625-33.
9. Humbert, L. and Lebrun, J.J. (2012) *Cell Signal* 25, 490-500.
10. Zhang, L.P. et al. (1999) *J Hepatol* 31, 703-11.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key**WB:** Western Blotting**Cross-Reactivity Key**

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.
 All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.