

PAI-2 Human E. coli

Product Data Sheet

Type: Recombinant	Cat. No.:	
Source: E. coli	RBG10264002	(2 µg)
Species: Human	RBG10264010	(10 µg)
Other names: Plasminogen Activator Inhibitor-2, Urokinase Inhibitor	RBG10264100	(100 µg)

Description

PAI-2 is an inhibitory serpin expressed mainly in keratinocytes, activated monocytes, and placental trophoblasts. It exists predominantly as a 47 kDa, nonglycosylated, intracellular protein, which can be induced to be secreted as 60 kDa glycoprotein. The glycosylated and unglycosylated forms of PAI-2 are equally effective as inhibitors of urokinase-type plasminogen activator (uPA), the only established physiological target of this serpin. PAI-2 has a unique ability to form dormant polymers spontaneously and reversibly under physiological conditions. The physiological relevance of this property, which is neither a consequence of any mutation in the PAI-2 gene nor associated with any known disorder, is still unclear. However, it appears that the formation of intracellular, dormant polymers may be important for the controlled release of the inhibitor from PAI-2 producing cells. Plasma levels of PAI-2 are usually low or undetectable, except during pregnancy and in some forms of monocytic leukemia. Secretion of PAI-2 from the placenta normally occurs during the third trimester of pregnancy, and accounts for the dramatic increase in PAI-2 levels (up to 250 ng/ml), which are maintained at these levels until postpartum, and then rapidly decline. In addition to its vital role in protecting the placenta from degradation by uPA and/or uPA-activated proteases, PAI-2 has been shown to be essential for the prevention of metastatic spread of neck, lung and breast cancers. The beneficial effect of PAI-2 seen in these studies is presumed to stem from its ability to inhibit uPA-dependent cell dissemination. PAI-2 has also been reported to inhibit keratinocyte proliferation, and to participate in the innate immune response during viral infection. Recombinant Human PAI-2 is a 46.5 kDa, nonglycosylated protein of 415 residues.

Research topic

Diabetology - Other Relevant Products, Oncology

Amino Acid Sequence

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MEDLCVANTL FALNLFKHLA KASPTQNLFL SPWSISSTMA MVMGSRGST EDQMAKVLQF NEVGANAVTP MTPENFTSCG
FMQQIQKGSY PDAILQAQAA DKIHSSFRSL SSAINASTGN YLLESVNKLF GEKSASFREE YIRLCQKYYS SEPQAVDFLE
CAEEARKKIN SWVKTKGK IPNLLPEGSV DGDTRMVLVN AVYFKGKWK PFEKLNGLY PFRVNSAQT PVQMMYLREK
LNIGYIEDLK AQILELPYAG DVSMFLLLPD EIADVSTGLE LLESEITYDK LNKWTSKDKM AEDEVEVYIP QFKLEEHYEL
RSILRSMGME DAFNKGRANF SGMSEKNDLF LSEVFHQAMV DVNEEGTEAA AGTGGVMTGR TGHGGPQFVA DHPFLFLIMH
KITNCILFFG RFSSP
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Source

E. coli

Purity

95%

Biological Activity

Determined by its inhibitory effect against single chain tPA induced cleavage of a chromogenic substrate in Imidazole Buffer at 37°C. Half maximal inhibition against 1.0 µg/ml of single chain tPA was obtained at a concentration of 1.0 µg/ml.

Endotoxin

Endotoxin level is <0.1 ng/µg of protein (<1EU/µg).

Reconstitution

Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.

Storage, Stability/Shelf Life

-20°C

HEADQUARTERS:				
BioVendor Laboratorní medicína, a.s.	Karasek 1767/1	621 00 Brno CZECH REPUBLIC	Phone: +420-549-124-185 Fax: +420-549-211-460	E-mail: info@biovendor.com sales@biovendor.com Web: www.biovendor.com
AUSTRIA: BioVendor GesmbH	Nußdorfer Straße 20/10	1090 Vienna AUSTRIA	Phone: +43-1-89090-25 Fax: +43-1-89090-2515	E-mail: infoAustria@biovendor.com
GERMANY, SWITZERLAND: BioVendor GmbH	Otto-Hahn-Straße 16	34123 Kassel GERMANY	Phone: +49-6221-433-9100 Fax: +49-6221-433-9111	E-mail: infoEU@biovendor.com
USA, CANADA AND MEXICO: BioVendor LLC	128 Bingham Rd. Suite 1300	Asheville, NC 28806 USA	Phone: +1-828-575-9250 +1-800-404-7807 Fax: +1-828-575-9251	E-mail: infoUSA@biovendor.com