Recombinant Human SERPINB2

Cat. No. SERPINB2-1554H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human serpin peptidase inhibitor, clade B (ovalbumin), member 2 was expressed in*E coli*Cells. MW = 47kDa.
Species	Human
Source	E.coli
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 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

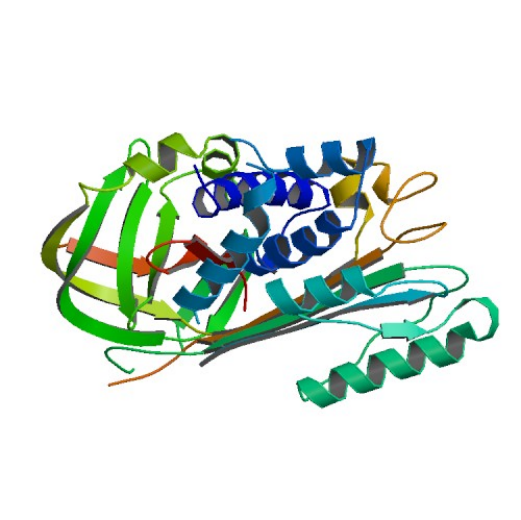
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	during viral infection. Recombinant human PAI-2 is a 415-residue nonglycosylated protein.
Sequence	MEDLCVANTL FALNLFKHLA KASPTQNLFL SPWSISSTMA MVYMGSRGST EDQMAKVLQF NEVGANAVT PMTPENFTSC GFMQQIQKGS YPDAILQAQA ADKIHSSFRS LSSAINASTGN YLLESVNK LFGEKSASFR EEYIRLCQKY YSSEPQAVDF LECAEEARKK INSWVKTQTK GK IPNLLPE GSVDGDTRMV LVNAVYFKGK WKTPFEKKLN GLYPFRVNSA QRT.
Purity	Greater than 95% by SDS-PAGE gel and HPLC analyses. Endotoxin level is less than 0.1 ng per μg (1EU/μg).
Storage	The lyophilized PAI-2 recombinant protein is stable for at least 2 years from date of receipt at -20˚C. Reconstituted PAI-2 is stable for at least 3 months when stored in working aliquots with a carrier protein at -20˚C. As with any protein, exposing PAI-2 recombinant protein to repeated freeze / thaw cycles is not recommended. When working with proteins care should be taken to keep recombinant protein at a cool and stable temperature.

GENE INFORMATION

Gene Name	SERPINB2 serpin peptidase inhibitor, clade B (ovalbumin), member 2 [Homo sapiens]
Synonyms	SERPINB2; serpin peptidase inhibitor, clade B (ovalbumin), member 2; PAI; PAI2; PAI-2; PLANH2; HsT1201; serine (or cysteine) proteinase inhibitor, clade B (ovalbumin), member 2; Plasminogen activator inhibitor 2; Plasminogen activator inhibitor 2; Monocyte Arg-serpin; Monocyte Arg-serpin
Gene ID	5055

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mRNA Refseq	NM_001143818
Protein Refseq	NP_001137290
MIM	173390
UniProt ID	P05120
Chromosome Location	18q21.3
Pathway	Hemostasis
Function	peptidase inhibitor activity; serine-type endopeptidase activity; serine-type endopeptidase inhibitor activity
PDB rendering based on 1by7.	

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