

## Serpin A5 Protein, Mouse (Baculovirus, His)

<b>Cat. No.:</b>	HY-P72055
<b>Synonyms:</b>	Serpina5; Pci; Plasma serine protease inhibitor; Plasminogen activator inhibitor 3; PAI-3; PAI3; Protein C inhibitor; PCI; Serpin A5
<b>Species:</b>	Mouse
<b>Source:</b>	Sf9 insect cells
<b>Accession:</b>	P70458 (S25-P405)
<b>Gene ID:</b>	268591
<b>Molecular Weight:</b>	Approximately 45.3 kDa

### PROPERTIES

<b>AA Sequence</b>	<pre> S K K K K A K E S S      V G A V G P P S S K      D F A F R L Y R A L      V S E S P G Q N V F F S P L S V S M S L      G M L S L G A G L K      T K T Q I L D G L G      L S L Q Q G Q E D K L H K G F Q Q L L Q      R F R Q P S D G L Q      L S L G S A L F K D      P A V H I R D D F L S A M K T L Y M S D      T F S T N F G N P E      I A K K Q I N N Y V      A K Q T K G K I V D F I K D L D S T H V      M I V V N Y I F F K      A K W Q T A F S E T      N T H K M D F H V T P K R T T Q V P M M      N R E D G Y S Y Y L      D Q N I S C T V V G      I P Y Q G N A I A L F I L P S E G K M K      Q V E D G L D E R T      L R N W L K M F T K      R R L D L Y L P K F S I E A T Y K L E N      V L P K L G I Q D V      F T T H A D L S G I      T D H T N I K L S E M V H K S M M E V E      E S G T T A A A I T      G A I F T F R S A R      P S S L K I E F T R P F L L T L M E D S      H I L F V G K V T R      P           </pre>
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.2 µm solution of PBS, 6% Trehalose, pH 7.4.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
<b>Storage &amp; Stability</b>	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	Serpin A5 Protein, a heparin-dependent serine protease inhibitor, intricately governs proteolytic activities in body fluids and secretions. This multifaceted protein exerts its function by irreversibly binding to the serine activation site of serine proteases, thereby inactivating them. With a role in the regulation of both intravascular and extravascular proteolysis,
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Serpin A5 plays a crucial hemostatic role in blood plasma. Acting as a procoagulant and pro-inflammatory factor, it inhibits activated protein C factor and the generation of activated protein C factor by the thrombin/thrombomodulin complex. Simultaneously, it acts as an anticoagulant by inhibiting factors like prothrombin, factor XI, factor Xa, plasma kallikrein, and fibrinolytic enzymes. In seminal plasma, Serpin A5 targets serine proteases in the reproductive system, indirectly protecting male genital tract components from excessive acrosin release. It further regulates sperm motility and fertilization by inhibiting various enzymes. In urine, the protein inhibits plasminogen activator and kallikrein activities, while also inactivating membrane-anchored serine proteases involved in tumor cell invasion and metastasis. Additionally, Serpin A5 may serve a non-inhibitory role as a hydrophobic hormone carrier in seminal plasma and urine through its binding to retinoic acid. Its inhibitory potency is significantly enhanced in the presence of glycosaminoglycans, heparin, thrombomodulin, and phospholipid vesicles.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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