

# Active Recombinant Rat SERPINB2 protein, His&hFc-tagged

**Cat. No.** SERPINB2-5001R    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Active Recombinant Rat SERPINB2 protein(P29524)(1~416 aa), fused with N-terminal His tag and C-terminal hFc tag, was expressed in HEK293.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Species</b>          | Rat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Source</b>           | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>ProteinLength</b>    | 1-416 aa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Form</b>             | Lyophilized from sterile PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Bio-activity</b>     | Serpin B2, also known as PAI-2, is an approximately 60 kDa serine protease inhibitor. It is primarily secreted by macrophages and monocytes and can form disulfide-linked multimers. Serpin B2 inhibits both the urokinase-type and tissue-type plasminogen activators (uPA and tPA). Serpin B2 also promotes the clearance of uPA by enhancing its binding and uptake by LRP. It limits fibril formation by Huntington protein (HTT) and beta-Amyloid peptides. It promotes Th2 biased immune responses and is important for intestinal CCL2 production, monocyte recruitment, and nematode clearance. A non-glycosylated form of Serpin B2 is retained intracellularly where it interferes with TNF-α induced apoptosis by protecting the Retinoblastoma protein (RB1) from calpain digestion. It also inhibits proteasome activity in activated endothelial cells. The activity of recombinant rat PAI-2 was measured by its ability to inhibit uPA cleavage of a peptide substrate, N-carbobenzyloxy-Gly-Gly-Arg-7-amido-4-methylcoumarin (Z-GGR-AMC) in t |

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The assay buffer 50 mM Tris, 0.01% Tween 20, pH 8.5. The 50 ul different concentrations of rrPAI-2 (MW: 78.3 KD) was incubated with 50ul 2ug/ml rhuPA (EPA140Mu61) at room temperature for 15 minutes. Loading 50  $\mu$  of the incubated mixtures into empty wells of a plate, and start the reaction by adding 50  $\mu$  of 200  $\mu$ M substrate (Z-GGR-AMC). Include a substrate blank containing 50  $\mu$  of assay buffer and 50  $\mu$  of 200  $\mu$ M substrate. Then read at excitation and emission wavelengths of 380 nm and 460 nm, respectively, in kinetic mode for 5 minutes. The result was shown and it was obvious that recombinant rat PAI2 significantly decreased uPA activity. The inhibition IC<sub>50</sub> was <73 nM.

|                       |                                                                                                            |
|-----------------------|------------------------------------------------------------------------------------------------------------|
| <b>Molecular Mass</b> | 78.3kDa                                                                                                    |
| <b>Endotoxin</b>      | <1.0EU per 1 $\mu$ g (determined by the LAL method).                                                       |
| <b>Purity</b>         | > 95% as determined by SDS-PAGE.                                                                           |
| <b>Storage</b>        | Avoid repeated freeze/thaw cycles. Store at -20°C for 12 months. Aliquot and store at -80°C for 12 months. |
| <b>Reconstitution</b> | Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.                       |

## GENE INFORMATION

|                        |                                                                                                                                                                            |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | Serpinb2 serpin peptidase inhibitor, clade B (ovalbumin), member 2 [ <i>Rattus norvegicus</i> ]                                                                            |
| <b>Official Symbol</b> | SERPINB2                                                                                                                                                                   |
| <b>Synonyms</b>        | SERPINB2; serpin peptidase inhibitor, clade B (ovalbumin), member 2; plasminogen activator inhibitor 2 type A; PAI-2; serpin B2; serine (or cysteine) peptidase inhibitor, |

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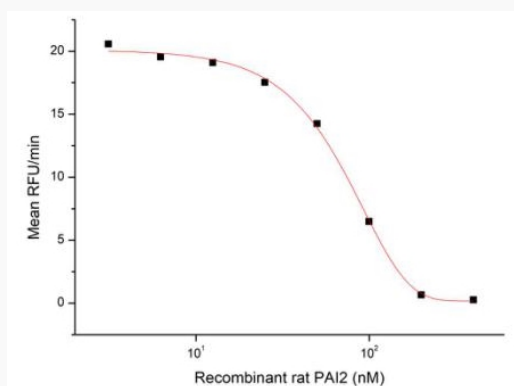
clade B, member 2; serine (or cysteine) proteinase inhibitor, clade B, member 2; Pai2a;

**Gene ID** [60325](#)

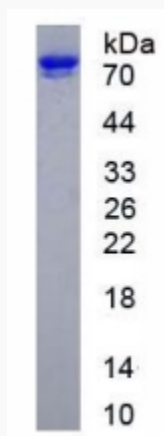
**mRNA Refseq** [NM\\_021696](#)

**Protein Refseq** [NP\\_067728](#)

#### Activity



#### SDS-PAGE



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