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## Product Data Sheet

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Product Name: SERPINI1 Human, His  
 Cat. No.: GP24552  
 Batch No.: 1

### Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	Neuroserpin; Peptidase inhibitor 12; PI-12; Serpin I1; SERPINI1; PI12.		
Amino Acid Sequence	MKHHHHHHASTGATFPEEAI ADLSVNMYNR LRATGEDENI LFSPLSIALA MGMEMELGAQG STQKEIRHSM GYDSLKNGEE FSFLKEFSNM VTAKESQYVM KIANSLFVQN GFHVNEEFLQ MMKKYFNAAV NHVDFSQNVV VANYINKWVE NNTNNLVKDL VSPRDFDAAT YLALINAVYF KGNWKSQFRP ENTRTFSFTK DDESEVQIPM MYQQGEFYFG EFS DGSNEAG GIYQVLEIPY EGDEISMMLV LSRQEVPLAT LEPLVKAQLV EEWANSVKKQ KVEVYLPRFT VEQEIDLKDV LKALGITEIF IKDANLTGLS DNKEIFLSKA IHKSFLEVNE EGSEAAVSG MIAISRM AVL YPQVIVDHPF FFLIRNRRTG TILFMGRVMH PETMNTSGHD FEEL.		
Solubility	It is recommended to add 200 $\mu$ l deionized water to prepare a working stock solution of approximately 0.5mg/ml and let the lyophilized pellet dissolve completely. SERPINI1 is not sterile! Please filter the product by an appropriate sterile filter before using it in the cell culture.		
Formulation	Filtered (0.4 $\mu$ m) and lyophilized from 0.5mg/ml in 0.025M phosphate buffer and 0.035M NaCl, pH 7.4.		

### Introduction

SERPINI1 (Neuroserpin) is an inhibitory serpin which is expressed primarily in the central nervous system. Even though the physiological target of SERPINI1 is still vague, amassed evidence suggest that SERPINI1 has an imperative role in controlling proteolytic degradation of extracellular matrix (ECM) during synaptogenesis and the subsequent development of neuronal plasticity. The neuroprotective role of SERPINI1 has been demonstrated in transgenic mice lacking SERPINI1 expression. The deficiency of SERPINI1 in these mice is linked with motor neuron disease characterized by axonal degradation. In humans, defects in SERPINI1, caused by point mutations in the

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

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neuroserpin gene, trigger a hereditary disorder known as the familial encephalopathy with neuroserpin inclusion bodies (FENIB).

### Stability

Store lyophilized protein at -20°C . Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after two weeks at 4°C .

### Background

SERPINI1 Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain (a.a 17-410) containing 404 amino acids and including a 10 a.a N-terminal His tag. The total molecular mass is 45.9kDa (calculated).

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