

## Recombinant Human Neuroserpin

### Information

<b>Gene ID</b>	5274
<b>Accession #</b>	Q99574
<b>Alternate Names</b>	Peptidase Inhibitor 12, PI-12, Serpin I1, NSP
<b>Source</b>	Escherichia coli.
<b>M.Wt</b>	Approximately 44.7 kDa, a single non-glycosylated polypeptide chain containing 394 amino acid residues.
<b>AA Sequence</b>	TGATFP EEAI ADLSVNMYNR LRATGEDENI LFSPLSIALA MGMMELGAQG STQKEIRHSM GYDSLKNGEE FSFLKEFSNM VTAKESQYVM KIANSLFVQN GFHVNEEFLLQ MMKKYFNAAV NHVDFSQNVA VANYINKWVE NNTNNLVKDL VSPRDFDAAT YLALINAVYF KGNWKSQFRP ENTRTFSFTK DDESEVQIPM MYQQGEFYYG EFSGDSNEAG GIYQVLEIPY EGDEISMMLV LSRQEVPLAT LEPLVKAQLV EEWANSVKKQ KVEVYLPRFT VEQEIDLKDV LKALGITEIF IKDANLTGLS DNKEIFLSKA IHKSFLEVNE EGSEAAVSG MIAISRMVAVL YPQVVDHPF FFLIRNRRTG TILFMGRVMH PETMNTSGHD FEEL
<b>Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Stability &amp; Storage</b>	Use a manual defrost freezer and avoid repeated freeze-thaw cycles - 12 months from date of receipt, -20 to -70 °C as supplied - 1 month, 2 to 8 °C under sterile conditions after reconstitution - 3 months, -20 to -70 °C under sterile conditions after reconstitution
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.
<b>Reconstitution</b>	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.
<b>Biological Activity</b>	Fully biologically active when compared to standard. The ED <sub>50</sub> as determined by a cell proliferation assay using rat C6 cells is less than 0.5 µg/ml, corresponding to a specific activity of > 2000 IU/mg.
<b>Shipping Condition</b>	Gel pack.
<b>Handling</b>	Centrifuge the vial prior to opening.
<b>Usage</b>	For Research Use Only! Not to be used in humans.

### Components and Storage

Components	5µg	100µg	500µg
Recombinant Human Neuroserpin	5µg	100µg	500µg

Use a manual defrost freezer and avoid repeated freeze-thaw cycles

- 12 months from date of receipt, -20 to -70 °C as supplied
- 1 month, 2 to 8 °C under sterile conditions after reconstitution
- 3 months, -20 to -70 °C under sterile conditions after reconstitution

## Quality Control

Purity	> 95 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/ $\mu$ g of rHuNeuroserpin as determined by LAL method.

## Description

Neuroserpin encoded by the SERPINI1 gene in humans is a member of the serine proteinase inhibitor (serpin) family. It reacts preferentially with tissue-type plasminogen activator (tPA). Neuroserpin is expressed mainly in the central nervous system (CNS) in response to neuronal depolarization and plays an important role in the development of synaptic plasticity. Mutations in human neuroserpin result in a form of autosomal dominant inherited dementia which is characterized by the presence of intraneuronal inclusion bodies and is known as Familial Encephalopathy with Neuroserpin Inclusion Bodies.

## Reference

1. Berger P, Kozlov SV, Cinelli P, et al. 1999. Mol Cell Neurosci, 14: 455-67
2. Hill RM, Coates LC, Parmar PK, et al. 2002. Ann N Y Acad Sci, 971: 406-15
3. Simonin Y, Charron Y, Sonderegger P, et al. 2006. J Neurosci, 26: 10614-9
4. Ricagno S, Caccia S, Sorrentino G, et al. 2009. J Mol Biol, 388: 109-21
5. Yepes MandLawrence DA. 2004. Thromb Haemost, 91: 457-64.

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