

Neuroserpin, human recombinant

CATALOG #:	7181-10	10 µg
	7181-50	50 µg
ALTERNATE NAMES:	Serp11, Protease inhibitor 12	
SOURCE:	E. Coli	
PURITY:	≥ 96% by SDS-PAGE gel and HPLC analyses	
MOL. WEIGHT:	44.8 kDa	
ENDOTOXIN LEVEL:	< 0.1 ng/µg of protein (<1EU/µg).	
FORM:	Lyophilized	
FORMULATION:	Sterile filtered through a 0.2 micron filter. Lyophilized from 20 mM Sodium Phosphate pH 7.8 and 50 mM NaCl	
STORAGE CONDITIONS:	Store at -20°C. After reconstitution, aliquot and store at -20°C to -80°C. Avoid repeated freezing and thawing cycles.	

RECONSTITUTION:

Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. This solution can be stored at 2-8°C for up to 1 week. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.

DESCRIPTION:

Neuroserpin is an inhibitory serpin that is expressed predominantly in central nervous system. Although the physiological target of neuroserpin is still unclear, cumulative evidence suggest that it plays an important role in controlling proteolytic degradation of extracellular matrix (ECM) during synaptogenesis and the subsequent development of neuronal plasticity. In the adult brain, neuroserpin is secreted from the growth cones of neurons in areas where synaptic changes are associated with learning and memory, i.e. cerebral cortex, hippocampus, and amygdala. The neuroprotective role of neuroserpin has been demonstrated in transgenic mice lacking neuroserpin expression. The deficiency of neuroserpin in these mice was associated with motor neuron disease characterized by axonal degradation. In humans, defects in neuroserpin, caused by point mutations in the

neuroserpin inclusion bodies (FENIB). Recombinant human neuroserpin is a 44.8 kDa non-glycosylated protein containing 395 amino-acid residues.

AMINO ACID SEQUENCE:

MTGATFPPEEA IADLSVNMVN RLRATGEDEN ILFSPLSIAL AMGMMEGAQ
GSTQKEIRHS MGYDSLKNGE EFSFLKEFSN MVTAKESQYV MKIANSLFVQ
NGFHVNEEFL QMMKKYFNAA VNHVDFSQNV AVANYINKWV ENNTNNLVKD
LVSPRDFDAA TYLALINAVY FKGWKSQFR PENTRTFSFT KDDSEVQIP
MMYQQGEFYF GEFSDGSNEA GGIYQVLEIP YEGDEISMML VLSRQEVPLA
TLEPLVKAQL VEEWANSVKK QKVEVYLPRF TVEQEIDLKD VLKALGITEI FIKDANLTGL
SDNKEIFLSK AIHKSFLEVN EEGSEAAAVS GMIAISRMV LYPQVIVDHP FFLLIRNRRT
GTILFMGRVM HPETMNTSGH DFEEL

BIOLOGICAL ACTIVITY:

Determined by the dose-dependent stimulation of the proliferation of rat C6 cells using a concentration range of 0.3-0.6 µg/ml.

RELATED PRODUCTS:

- Serpin E1/PAI-1, human recombinant (Cat # 4731-10, -100, -1000)
- Serpin A6 Antibody (Cat # 3906-100)
- Serpin A6 Blocking Peptide (Cat # 3906BP-50)

FOR RESEARCH USE ONLY. Not to be used in humans