

DATASHEET

Version 20181206

Neuroserpin, Human

Cat. No.: Z03009-1

Size: 1.0 mg

Synonyms: Serpin I1, Protease inhibitor 12

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 gene, underlie a hereditary disorder called the familial encephalopathy with neuroserpin inclusion bodies (FENIB).

Amino Acid Sequence:

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00001 TGATFP EEAI ADLSVNMYNR LRATGEDENI LFSPLSIALA
00041 MGMMELGAQG STQKEIRHSM GYDSLKNGEE FSFLKEFSNM
00081 VTAKESQYVM KIANSLFVQN GFHVNEEFLQ MMKRYFNAAV
00121 NHVDFSQNVV VANYINKWVE NNTNNLVKDL VSPRDFDAAT
00161 YLALINAVYF KGNWKSQFRP ENRTFSFTK DDESEVQIPM
00201 MYQQGEFFYG EFS DGSNEAG GIYQVLEIPY EGDEISMMLV
00241 LSRQEVPLAT LEPLVKAQLV EEWANSVKKQ KVEVYLPRFT
00281 VEQEIDLKDV LKALGITEIF IKDANLTGLS DNKEIFLSKA
00321 IHKSFLEVNE EGSEAAVSG MIAISRMVAVL YPQVIVDHPF
00361 FFLIRNRRTG TILFMGRVMH PETMNTSGHD FEEL
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Source: CHO

Species: Human

Biological Activity: ED₅₀ < 2 µg/ml, measured by the dose-dependent stimulation of the proliferation of rat C6 cells, corresponding to a specific activity of > 500 units/mg.

Molecular Weight: 40-45 kDa, observed by non-reducing SDS-PAGE.

Formulation: Lyophilized after extensive dialysis against PBS.

Reconstitution: Reconstituted in ddH₂O or PBS at 100 µg/ml.

Purity: > 95% as analyzed by SDS-PAGE and HPLC.

Endotoxin Level: < 0.2 EU/µg, determined by LAL method.

Storage: Lyophilized recombinant Human Neuroserpin remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rh_Neuroserpin should be stable up to 1 week at 4°C or up to 2 months at -20°C.