

Overview

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| 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). |
| Species Source | Human <i>CHO</i> |
| Biological Activity | ED ₅₀ < 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. |
| Sequence | <p>TGATFP EEAI ADLSVNMYNR LRATGEDENI LFSPLSIALA MGM MELGAQG STQKEIRHSM GYDSLKNGEE FSFLKEFSNM VTAKESQYVM KIANS LFVQN GFHVNEEFLO MMK YFNAAV NHVDFSQNVA VANYINKWVE NNTNNLVKDL VSPRDFDAAT YLALINAVYF KGNWKSQFRP ENTRTFSFTK DDESEVQIPM MYQQGEFYYG EFS DGSNEAG GIYQVLEIPY EGDEISMMLV LSRQEVPLAT LEPLVKAQLV EEWANSVKKQ KVEVYLPRFT VEQEIDLKDV LKALGITEIF IKDANLTGLS DNKEIFLSKA IHKSFLEVNE EGSEAAAVSG MIAISRMAVL YPQVIVDHPF FFLIRNRTG TILFMGRVMH PETMNTSGHD FEEL</p> |

Properties

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| Measured Molecular Weight | 40-45 kDa, observed by non-reducing SDS-PAGE. |
| Purity | > 95% as analyzed by SDS-PAGE and HPLC. |
| Formulation | Lyophilized after extensive dialysis against PBS. |
| Reconstitution | Reconstituted in ddH ₂ O or PBS at 100 µg/ml. |
| 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. |
| Note | For research use only |

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