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# Neuroserpin

Catalog # PVGS1208

## Product Information

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| **Primary Accession** | Q99574 |
| **Species** | Human |
| **Sequence** | Thr17-Leu410 |
| **Purity** | > 95% as analyzed by SDS-PAGE<br>> 95% as analyzed by HPLC |
| **Endotoxin Level** | |
| **Expression System** | CHO |
| **Formulation** | Lyophilized after extensive dialysis against PBS. |
| **Reconstitution** | It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in dd$H_2O$ or PBS up to 100 □g/ml. |
| **Storage & Stability** | Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles. |

## Additional Information

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| **Gene ID** | 5274 |
| **Other Names** | Neuroserpin, Peptidase inhibitor 12, PI-12, Serpin I1, SERPINI1, PI12 |
| **Target Background** | 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). |

## Protein Information

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| **Name** | SERPINI1 |
| **Synonyms** | PI12 |
| **Function** | Serine protease inhibitor that inhibits plasminogen activators and plasmin but not thrombin (PubMed:11880376, PubMed:19265707, PubMed:19285087, PubMed:26329378, PubMed:9442076). May be involved in the formation or reorganization of synaptic connections as well as for synaptic plasticity in the adult nervous system. May protect neurons from cell damage by tissue-type plasminogen activator (Probable). |
| **Cellular Location** | Secreted. Cytoplasmic vesicle, secretory vesicle lumen. Perikaryon |
| **Tissue Location** | Detected in brain cortex and hippocampus pyramidal neurons (at protein level) (PubMed:17040209). Detected in cerebrospinal fluid (at protein level) (PubMed:25326458). Predominantly expressed in the brain (PubMed:9070919). |