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THE TECHNOLOGY

The neurotrophins, such as nerve growth factor (NGF) and brain derived neurotrophic factor (BDNF), are among the molecular determinants that regulate the generation of diverse neuronal populations and the maintenance of their functions within the nervous system. Proneutrophins are uncleaved precursor of neutrophins. Mature neurotrophins interact with both receptor tyrosine kinases (Trks) and the p75 receptor (p75). P75 facilitates the robust Trk activation to promote cell survival. P75 also promotes cell death in a Trk-independent manner. The interaction of p75 and neurotrophins plays a very important role in normal tissue development, as well as, in many disease states. It is desirable to regulate cell death under different circumstances. Proneutrophins are higher affinity ligand for p75 and induce cell death through p75. These findings provide a powerful tool to regulate the cell fate through the p75 signaling pathway.

Patents	US 7,507,799, US 8,034,347
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Inventors	Barbara Hempstead, Pouneh Kermani, Ramee Lee & Kenneth Teng
Licensee	Millipore Corporation

THE PRODUCTS

Anti-pro-NGF Antibody

Pro-NGF is the uncleaved precursor form of NGF. The anti-pro-NGF antibody was generated by using GST-fusion protein with a peptide of NGF as the immunogen in rabbits. Unlike other antibodies generated to the mature domain of NGF, this antibody detects pro-NGF, but not mature NGF.

Anti-pro-BDNF Antibody

Pro-BDNF is the uncleaved precursor form of BDNF. The anti-pro-BDNF antibody was generated by using GST-fusion protein with a peptide of BDNF as the immunogen in chickens. The antibody detects pro-BDNF, but not mature BDNF.