



## ANTI-NEUROTROPHIN-4

Developed in Goat, Affinity Isolated Antibody

Product Number **N 9898**

### Product Description

Anti-Neurotrophin-4 (NT-4) is developed in goat by repeated immunization with purified human recombinant NT-4.

Anti-Neurotrophin-4 specifically recognizes human recombinant NT-4 by immunoblotting, neutralization studies and ELISA. This antibody exhibits no cross-reactivity with other cytokines when tested by ELISA.

Neurotrophic factors define a family of related proteins, which are important in the development, maintenance, and regulation of neurons in both the peripheral and central nervous system.

Neurotrophin-4 (NT-4, also called NT-4/5 or NT-5) (14 kDa or 28 kDa dimer) is a member of the neurotrophin family of growth factors. NT-4 shares 95 % sequence homology between human and rat. NT-4 from human, rat and *Xenopus* are active on chick dorsal root ganglia. NT-4 promotes survival and differentiation of various cells including spinal neurons, basal forebrain cholinergic neurons, hippocampal neurons, cerebellar granule cells, embryonic dopaminergic neurons of the mesencephalon, noradrenergic neurons of the *locus coeruleus*, dopaminergic, GABAergic and serotonergic neurons of the *substantia nigra*, and embryonic trigeminal and jugular neurons.

### Reagent

Anti-Neurotrophin-4 is supplied as 100 µg of lyophilized affinity isolated goat polyclonal antibody in phosphate buffered saline. Resuspend the lyophilized antibody in 1 ml sterile distilled water containing at least 100 µg human serum albumin or bovine serum albumin and 0.1 % sodium azide. Be careful to reconstitute the entire contents of the vial. Portions of the pellet may have dislodged during shipment and may not be in the bottom of the vial.

### Storage/Stability

Store the lyophilized antibody at -20 °C. Upon reconstitution, store in working aliquots at -20 °C. Avoid repeated cycles of freezing and thawing. After reconstitution, this product is stable for six months at -20 °C.

## Product Information

### Product Profile

Anti-Neurotrophin-4 has been selected for its ability to neutralize the biological activity of human recombinant NT-4. The exact concentration of antibody required to neutralize recombinant NT-4 is dependent on cytokine concentration, cell type, growth conditions and the type of activity studied. The suggested neutralization concentration required to yield one-half maximal inhibition of NT-4 activity is approximately 1 to 3 µg/ml in the presence of 60 ng/ml of human recombinant NT-4, in a neuron survival assay using embryonic chick dorsal root ganglia neurons.

For immunoblotting, the recommended working concentration is 1 to 2 µg/ml. The detection limit for human recombinant NT-4 is approximately 2 ng/lane under non-reducing conditions and 0.5 ng/lane under reducing conditions.

For ELISA, the suggested concentration is 0.5 to 1.0 µg/ml. The detection limit for human recombinant NT-4 is approximately 0.08 ng/well.

Note: In order to obtain best results and assay sensitivities of different techniques and preparations, we recommend determining optimal working dilutions by titration test.

### References

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2. Callard, R., and Gearing, A., *The Cytokine Facts Book*, Academic Press, New York, NY, (1994).
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5. Kaplan, D.R. and Miller, F.D., Curr. Opin. Neurobiol., **10**, 381-391 (2000).

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