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Product Data Sheet

IK-10149 **Human Neurotrophin-3 ELISA Kit, 96 tests**

IK-10149A **Human Neurotrophin-3 ELISA Kit, 4 x 96 tests**

Range 15.6 pg/ml-1000pg/ml

Sensitivity < 2 pg/ml

Specificity Cross-reactivates with NT-4 <2.5%, and no detectable cross-reactivity with any other cytokine.

Storage Store at 4℃ for frequent use, at -20℃ for infrequent use. Avoid multiple freeze-thaw cycles (Shipped with wet ice.)

Expiration Four months at 4℃ and eight months at -20℃.

Application For quantitive detection of human Neurotrophin-3 in sera, plasma, body fluids, tissue lysates or cell culture supernates.

Principle Human Neurotrophin-3 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. Human Neurotrophin-3 specific-specific polyclonal antibodies were precoated onto 96-well plates. The human specific detection polyclonal antibodies were biotinylated. The test samples and biotinylated detection antibodies were added to the wells subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the human Neurotrophin-3 amount of sample captured in plate.

Kit Components

1. Lyophilized recombinant human NT-3 standard: 10ng/tube×2.
2. One 96-well plate precoated with anti- human NT-3 antibody.
3. Sample diluent buffer: 30 ml
4. Biotinylated anti- human NT-3 antibody : 130μl, dilution 1:100.
5. Antibody diluent buffer: 12ml.
6. Avidin-Biotin-Peroxidase Complex (ABC) : 130μl, dilution 1:100.
7. ABC diluent buffer: 12ml.
8. TMB color developing agent: 10ml.
9. TMB stop solution: 10ml.

Material Required But Not Provided

1. Microplate reader in standard size.
2. Automated plate washer.
3. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection.
4. Clean tubes and Eppendorf tubes.
5. Washing buffer (neutral PBS or TBS).

Preparation of 0.01M **TBS:** Add 1.2g Tris, 8.5g Nacl; 450μl of purified acetic acid or 700μl of concentrated hydrochloric acid to 1000ml H_2O and adjust pH to 7.2-7.6. Finally, adjust the total volume to 1L. Preparation of 0.01 M **PBS:** Add 8.5g sodium chloride, 1.4g Na_2HPO_4 and 0.2g NaH_2PO_4 to 1000ml distilled water and adjust pH to 7.2-7.6. Finally, adjust the total volume to 1L

Notice for Application of Kit

1. Before using Kit, spin tubes and bring down all components to bottom of tube.
2. Duplicate well assay was recommended for both standard and sample testing.
3. Don't let 96-well plate dry, dry plate will inactivate active components on plate.
4. In order to avoid marginal effect of plate incubation due to temperature difference (reaction may be stronger in the marginal wells), it is suggested that the diluted ABC and TMB solution will be pre-warmed in 37℃ for 30 min before using.

For Research use only; not for use as a diagnostic

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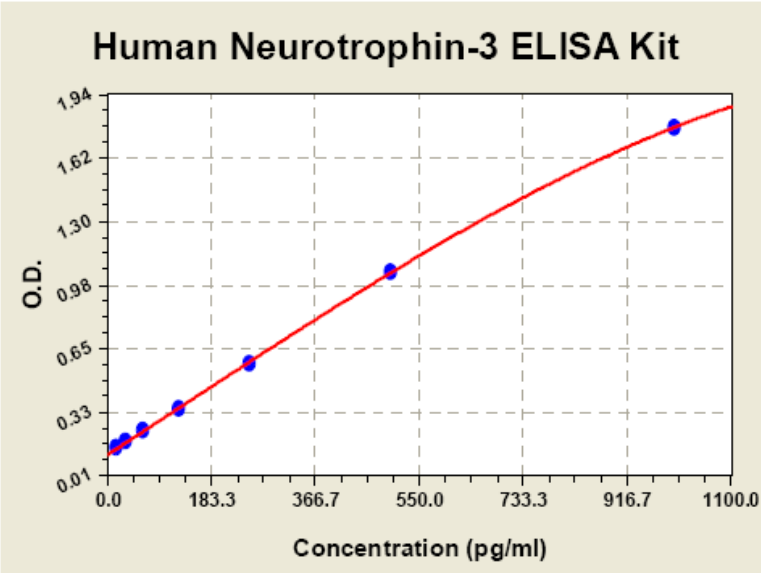
Human Neurotrophin-3 ELISA Kit-1X96 Well Plate Image



Background

Neurotrophin-3 (NT-3) is a new member of the nerve growth factor gene family, which plays an important role in the development and maintenance of the vertebrate nervous system.[1] NT-3 and its receptor, called neurotrophic tyrosine kinase receptor type 3 (Ntrk3; also called TrkC), are expressed early and throughout embryogenesis.[2] NT-3 is one of five neurotrophin growth factors which shape the development of the nervous system by regulating neuronal survival and differentiation.[3] NT-3 may be one of the central nervous system-derived factors that mediate neural crest (NC) cell proliferation in vivo.[4] NT-3 has been mapped to human chromosome 12p and mouse chromosome 6.[1]

Reference

1. Ozcelik, T.; Rosenthal, A.; Francke, U. Chromosomal mapping of brain-derived neurotrophic factor and neurotrophin-3 genes in man and mouse. *Genomics* 10: 569-575, 1991.
2. Tessarollo, L.; Vogel, K. S.; Palko, M. E.; Reid, S. W.; Parada, L. F. Targeted mutation in the neurotrophin-3 gene results in loss of muscle sensory neurons. *Proc. Nat. Acad. Sci.* 91: 11844-11848, 1994.
3. Donovan, M. J.; Hahn, R.; Tessarollo, L.; Hempstead, B. L. Identification of an essential nonneuronal function of neurotrophin 3 in mammalian cardiac development. *Nature Genet.* 14: 210-213, 1996.
4. Kalcheim, C.; Carmeli, C.; Rosenthal, A. Neurotrophin 3 is a mitogen for cultured neural crest cells. *Proc. Nat. Acad. Sci.* 89: 1661-1665, 1992.

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