

## Neurotrophin 4/5 (NT4/5) Rapid ELISA Kit: Human, Mouse, Rat and Monkey (1 Plate)

**Catalogue No.:** BEK-2218-1P

**Description:** The Biosensis Neurotrophin 4/5 Rapid™ enzyme-linked immunosorbent assay (ELISA) Kit is a sandwich ELISA that allows the specific, fast and reliable quantification of NT4/5 in less than 4 hours in cell culture supernatants, human citrate-plasma and brain extracts only if used as directed. Please refer to the kit protocol for specific use instructions for each substrate application, in particular blood samples. Accurate quantification of NT4/5 in human citrate-plasma requires a heterophilic antibody (HA) blocker which can be purchased separately (BL-003-1000).

This ELISA kit consists of a pre-coated polyclonal anti-NT4/5 capture antibody, a biotinylated anti-NT4/5 detection antibody and horseradish peroxidase (HRP)-conjugated streptavidin. The addition of a substrate (3,3',5,5'-tetramethylbenzidine, TMB) yields a colored reaction product, which is directly proportional to the concentration of NT4/5 present in samples and protein standards. A NT4/5 positive control (QC sample) is provided to assure consistent assay performance.

This NT4/5 ELISA kit employs a recombinant human NT4/5 standard. The capture and detection antibodies will also detect NT4/5 from other species due to a high degree of NT4/5 amino acid sequence homology. Therefore, this ELISA kit can be used to quantify NT4/5 in many species including mouse, rat and monkey.

The antibodies used in this kit bind to epitopes within the mature domain of NT4/5. Thus, this ELISA kit will quantify the mature form of NT4/5, and may also detect the full-length pro-form of NT4/5.

This ELISA kit has not been tested for other applications. It has been configured for research use only and is not to be used for diagnostic or clinical procedures.

**Related products:** BL-003-1000, Heterophilic antibody blocker: Sample diluent additive for accurate quantification or NT4/5 in human citrate-plasma.

**Batch No.:** Refer to the product label.

**Antigen:** FUNCTION: Target-derived survival factor for peripheral sensory sympathetic neurons. SUBCELLULAR LOCATION: Secreted protein. TISSUE SPECIFICITY: Highest levels in prostate, lower levels in thymus, placenta, and skeletal muscle. Expressed in embryonic and adult tissues. SIMILARITY: Belongs to the NGF-beta family.

**Other Names:** Neurotrophin-5; NT-5; Neurotrophic factor 5; Neurotrophin-4; NT-4; Neurotrophic factor 4; NTF5; NTF4

**Accession:** NTF4\_HUMAN

**Specificity:** Human.

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FOR RESEARCH USE ONLY

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**Cross-reactivity:** The capture and detection antibodies will also detect NT4/5 from other species due to a high degree of NT4/5 amino acid sequence homology. Therefore, this ELISA kit can be used to quantify NT4/5 in many species including mouse, rat and monkey.

**Storage:** Store at 2-8C.

**Expiry Date:** 12 months from purchase.

**Specific References:** Ishimoto T et al. (2018) Ergothioneine-induced neuronal differentiation is mediated through activation of S6K1 and neurotrophin 4/5-TrkB signaling in murine neural stem cells. *Cell Signal*. [Epub ahead of print]. Application: Mouse cell lysate and brain homogenate.

Allen RS et al. (2018) TrkB signaling pathway mediates the protective effects of exercise in the diabetic rat retina. *Eur J Neurosci*. doi: 10.1111/ejn.13909. [Epub ahead of print]. Application: Rat retina homogenates.

Maejima H et al. (2017) Exercise enhances cognitive function and neurotrophin expression in the hippocampus accompanied by changes in epigenetic programming in senescence-accelerated mice. *Neurosci Lett*. doi: 10.1016/j.neulet.2017.11.023. [Epub ahead of print]. Application: Mouse hippocampus homogenates.

Takahashi K et al. (2016) Exercise combined with low-level GABAA receptor inhibition up-regulates the expression of neurotrophins in the motor cortex. *Neurosci Lett*. doi: 10.1016/j.neulet.2016.10.052. [Epub ahead of print]. Application: Mouse cortex homogenates, in native cell lysis buffer.

**General References:** Lodouichi (2000) *J. Neurosci.* 20(6): 2155

Zhang et al. (1999) *J Neurosci. Meths.* 89 (1): 69

**Kit components:** The ELISA kit box contains 1 x 96-well pre-coated strip plate, protein standards, QC sample, detection reagents, wash and sample buffers, substrate buffer and detailed protocols.

**Range:** 15.6 - 1000 pg/mL

**Sensitivity:** This ELISA kit typically less than 10 pg/mL human NT4/5 (defined as 150% of blank value).

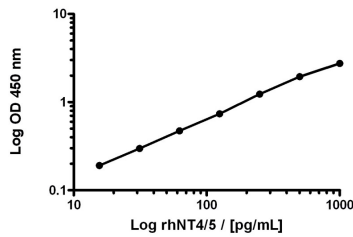
**Kit protocol:** Please refer to our online product listing for current protocol/MSDS versions.

**MSDS:** Please refer to our online product listing for current protocol/MSDS versions.

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This standard curve generated in our laboratories is for demonstration purposes only, but can be used as a guide to expected performance. A standard curve should be generated for each assay.

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