

## CE Marked BDNF Rapid ELISA Kit: Human (2 plates)

**Catalogue No.:** BEK-2211-2P-CE

**Description:** The Biosensis CE Marked BDNF Rapid™ enzyme-linked immunosorbent assay (ELISA) Kit is a sandwich ELISA that allows the preferential quantification of mature BDNF in less than 3 hours. This kit consists of a pre-coated mouse monoclonal anti-BDNF capture antibody, a biotinylated anti-BDNF 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 BDNF present in samples and protein standards. This BDNF ELISA kit employs a recombinant human BDNF standard approved by the World Health Organization (WHO, [www.nibsc.org](http://www.nibsc.org)). This kit is suitable to measure mature BDNF in human serum and citrate-treated plasma samples only. The antibodies used in this ELISA kit bind epitopes within the mature domain of the protein and therefore recognize the mature as well as the pro-form of BDNF. However, cross-reactivity to the full-length proBDNF protein is low.

This CE Marked BDNF Rapid™ ELISA [Cat. No. BEK-2211-2P-CE] Kit is approved for in-vitro diagnostic (IVD) applications in the European Economic Area (EEA). It has been developed by Biosensis and is manufactured by Calbiotech Inc. ([www.calbiotech.com](http://www.calbiotech.com)) for Biosensis.

BEK-2211-2P-CE is not approved for in-vitro diagnostic (IVD) applications in the United States. For research on human blood, customers MUST order the catalog number BEK-2211-2P. This research-use-only ELISA kit can be used for human and animal research purposes worldwide, and has been validated for a wider range of sample types and species.

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

**Antigen:** BDNF belongs to the neurotrophin family and regulates the survival and differentiation of neurons during development. The alterations in BDNF expression induced by various kinds of brain insult including stress, ischemia, seizure activity and hypoglycemia, may contribute to some pathologies such as depression, epilepsy, Alzheimer's Disease, and Parkinson's disease. FUNCTION: BDNF promotes the survival of neuronal populations that are all located either in the central nervous system or directly connected to it. BDNF is also a major regulator of synaptic transmission and plasticity at adult synapses in many regions of the CNS. The versatility of BDNF is emphasized by its contribution to a range of adaptive neuronal responses including long-term potentiation (LTP), long-term depression (LTD), certain forms of short-term synaptic plasticity, as well as homeostatic regulation of intrinsic neuronal excitability. SUBUNIT: Monomers and homodimers. Binds to NTRK2/TRKB. SUBCELLULAR LOCATION: Secreted protein. Post Translation Modification (PTM): The propeptide is N-glycosylated and glycosulfated. PTM: Converted into mature BDNF by plasmin (PLG). DISEASE: Defects in BDNF are a cause of congenital central hypoventilation syndrome (CCHS); also known as congenital failure of autonomic control or Ondine curse. CCHS is a rare disorder characterized by abnormal control of respiration in the absence of neuromuscular or lung disease, or an identifiable brain stem lesion. A deficiency in autonomic control of respiration results in inadequate or negligible ventilatory and arousal responses to hypercapnia and hypoxemia.

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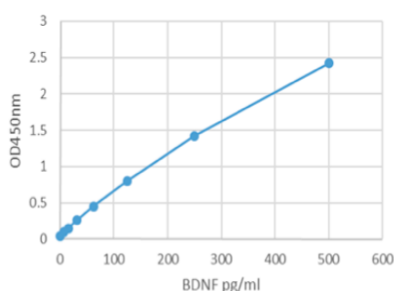
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CCHS is frequently complicated with neurocristopathies such as Hirschsprung disease that occurs in about 16% of CCHS cases. SIMILARITY: Belongs to the NGF-beta family.

<b>Other Names:</b>	Brain-derived neurotrophic factor; BDNF; Abrineurin
<b>Accession:</b>	P23560 BDNF_HUMAN;
<b>Applications:</b>	BEK-2211-1P-CE is expressly designed and tested only for use on human blood and plasma samples. Any other use is deemed "off label use" and thus the performance characteristics of the assay will have to be determined by the end user, and such results are not supported by Biosensis or CalBioTech at this time.
<b>Specificity:</b>	Human.
<b>Cross-reactivity:</b>	Reacts with BDNF from mouse, rat and numerous other species due to BDNF sequence homology.
<b>Storage:</b>	Store at 2-8C
<b>Expiry Date:</b>	See BEK-2211-2P-CE protocol insert for specific expiration dating of the kit and its components.
<b>Specific References:</b>	Valkenborghs SR et al. (2019) Aerobic exercise and consecutive task-specific training (AExaCTT) for upper limb recovery after stroke: A randomized controlled pilot study. Physiother Res Int. [Epub ahead of print]. Application: Human serum.
<b>Kit components:</b>	The ELISA kit box contains 2 x 96-well pre-coated strip plates, protein standards, detection reagents, wash and sample buffers, substrate buffer and detailed protocols.
<b>Range:</b>	7.8 pg/mL - 500 pg/mL
<b>Sensitivity:</b>	Typical limit of detection (LOD) for BDNF is < 3 pg/mL determined by calculating the mean + 2x standard deviation of mean of blank (n=20).
<b>Kit protocol:</b>	Please refer to our online product listing for current protocol/MSDS versions.
<b>MSDS:</b>	Please refer to our online product listing for current protocol/MSDS versions.



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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