Human Brain-Derived Neurotrophic Factor (BDNF) ELISA Kit

Sandwich ELISA for human BDNF in serum, plasma, tissue homogenates, and cell lysates — supporting research into neuronal plasticity, depression, exercise physiology, and neurotrophic signaling

The **Human Brain-Derived Neurotrophic Factor (BDNF) ELISA Kit** is a quantitative sandwich immunoassay for detection of human BDNF with an LOD of 61 pg/mL (0.061 ng/mL) and a detection range of 0.16–10 ng/mL. Validated sample matrices include serum, plasma, tissue homogenates, cell lysates, and cell culture supernatants. For serum and plasma, a 1:5 dilution in Standard/Sample Diluent Buffer is recommended as a starting point. BDNF concentrations in tissue and conditioned media are well within the detection range without dilution.

Brain-Derived Neurotrophic Factor (BDNF) is the most abundantly expressed neurotrophin in the adult mammalian brain, acting through the TrkB receptor to regulate synaptic plasticity, long-term potentiation, and neuronal survival. BDNF is produced by neurons as a precursor (proBDNF), cleaved to mature BDNF. Key research areas include: depression and antidepressant response (BDNF hypothesis of depression); exercise-induced neuroplasticity; cognitive function and Alzheimer's disease (reduced hippocampal BDNF); TrkB-targeted therapeutics. High BDNF concentrations are found in brain tissue (ng/mg protein range), concentrated media from neuronal cultures, and platelets (platelet-derived BDNF inflates plasma measurements). Tissue BDNF is well within the detection range of this kit.

Ordering Information

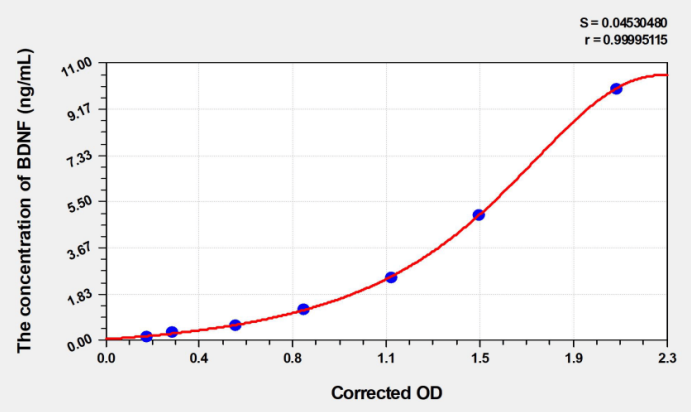
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ENZ-KIT275-0001	

Manuals, SDS & CofA

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- Validated for **serum**, **plasma**, tissue homogenates, cell lysates, and cell culture supernatants
- Detection range: 0.16–10 ng/mL — suitable for serum, plasma (1:5 dilution recommended), and high-concentration tissue and cell samples
- 96-well breakaway strip format; intra-assay CV <8%; inter-assay CV <10%



Representative Standard Curve — Human Brain-Derived Neurotrophic Factor (BDNF) ELISA Kit (ENZ-KIT275)

Handling & Storage

Use/Stability	When stored and handled as directed, the kit is stable until the expiration date on the label.
Handling	Store at 4°C upon receipt. For extended storage, keep at −20°C. Use before the expiry date printed on the label.
Short Term Storage	+4°C
Long Term Storage	−20°C
Shipping	Blue Ice

Regulatory Status

RUO - Research Use Only

Product Details

Application	ELISA
Application Notes	Quantification of BDNF in serum, plasma, brain tissue homogenates, muscle tissue, neuronal cell lysates, and conditioned media. For serum and plasma, a 1:5 dilution in Standard/Sample Diluent Buffer is recommended as a starting point. Standardize pre-analytical protocols for consistent blood-based measurements.
Assay Time	3.5 hours
Compatibility	Standard 96-well microplate reader capable of reading absorbance at 450 nm.
Contents	Pre-Coated Microplate, 96 well (12 breakaway strips of 8); Standard (Lyophilized); Biotinylated Detection Antibody (100×); Streptavidin-HRP Conjugate (100×); Standard/Sample Diluent Buffer; Biotinylated Antibody Diluent; HRP Diluent; Wash Buffer (25×); TMB Substrate Solution; Stop Reagent; Adhesive Plate Covers
Gene/Protein Identifier	BDNF
Sensitivity	0.061 ng/mL (Detection range: 0.16-10 ng/mL)
Species Reactivity	Human
Specificity	Human Brain-Derived Neurotrophic Factor (BDNF)

Technical Info / Product Notes	Two-step sequential sandwich ELISA. Capture antibody pre-coated on breakaway 96-well strips. Step 1: sample/standard incubation, 37°C, 80 min. Step 2: biotinylated detection antibody, 37°C, 50 min. Step 3: Streptavidin-HRP, 37°C, 50 min. Step 4: TMB substrate, 37°C, 20 min (protected from light). Stop reagent added; read at 450 nm. Intra-assay CV <8%; inter-assay CV <10%. Standard reconstituted in Standard/Sample Diluent Buffer. Do not mix reagents from different lot numbers (exception: TMB, Wash Buffer, Stop Reagent). Azide-free buffers required — azide inhibits HRP color development. Detection range: 0.16–10 ng/mL. LOD: 0.061 ng/mL.
UniProt ID	P23560
Wavelength	450 nm

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