



Human Brain derived neurotrophic factor, BDNF ELISA Kit

Product Code	CSB-E04501h
Abbreviation	BDNF
Protein Biological Process 1	Cardiovascular
Target Name	brain-derived neurotrophic factor
Uniprot No.	P23560
Alias	MGC34632, neurotrophin
Product Type	ELISA Kit
Immunogen Species	Homo sapiens (Human)
Sample Types	serum, plasma, cell culture supernates, tissue homogenates
Detection Range	0.3125 ng/mL-20 ng/mL
Sensitivity	0.063 ng/mL
Assay Time	1-5h
Sample Volume	50-100ul
Detection Wavelength	450 nm
Lead Time	3-5 working days after you place the order, and it takes another 3-5 days for delivery via DHL or FedEx.
Research Area	Cardiovascular
Gene Names	BDNF
Tag Info	quantitative
Protein Description	Sandwich

Description

The Human BDNF ELISA Kit allows for the in vitro quantitative determination of BDNF concentrations in serum, plasma, cell culture supernates, or tissue homogenates. This kit exclusively recognizes human BDNF. BDNF is ubiquitously expressed in the developing and adult mammalian brain and plays important roles in neuronal development, differentiation, neural regeneration, synaptic transmission, maintenance, plasticity, neurogenesis, and control of short- and long-lasting synaptic interactions involving memory and cognition. BDNF signals through its receptor NTRK2. Low BDNF or NTRK2 expression has been identified in multiple brain disorders and during normal brain aging, which is usually accompanied by mild brain atrophy, impaired neuronal function, and synaptic loss. Studies have shown that BDNF potentiates hippocampal long-term potentiation (LTP), elevates the release of glutamate, and has critical roles in the formation and recall of spatial memory.



The detection mechanism of this kit is based on the Sandwich-ELISA technique. BDNF in the sample is bound to the capture antibody immobilized on the microtiter plate and then sandwiched with a Biotin-labeled BDNF antibody. The solution color develops into blue after the ordinal addition of HRP-avidin and TMB. The color development is terminated after adding the stop solution, and the color turns from blue to yellow. The color intensity is positively correlated with BDNF content in the sample. The kit has been quality-controlled with high sensitivity, strong specificity, good linearity, high precision, high recovery, and high lot-to-lot consistency.

Target Details

This protein is a member of the nerve growth factor family. It is induced by cortical neurons, and is necessary for survival of striatal neurons in the brain. Expression of this gene is reduced in both Alzheimer s and Huntington disease patients. This gene may play a role in the regulation of stress response and in the biology of mood disorders. Multiple transcript variants encoding distinct isoforms have been described for this gene.

Product Precision

Intra-assay Precision (Precision within an assay): CV%<8%

Three samples of known concentration were tested twenty times on one plate to assess.

Inter-assay Precision (Precision between assays): CV%<10%

Three samples of known concentration were tested in twenty assays to assess.

	Intra-Assay Precision			Inter-Assay Precision		
Sample	1	2	3	1	2	3
n	20	20	20	20	20	20
Mean(ng/ml)	3.734	3.811	4.859	4.118	4.124	4.110
SD	0.074	0.050	0.088	0.084	0.085	0.087
CV(%)	7.797	5.183	7.999	8.351	8.424	8.639

Linearity

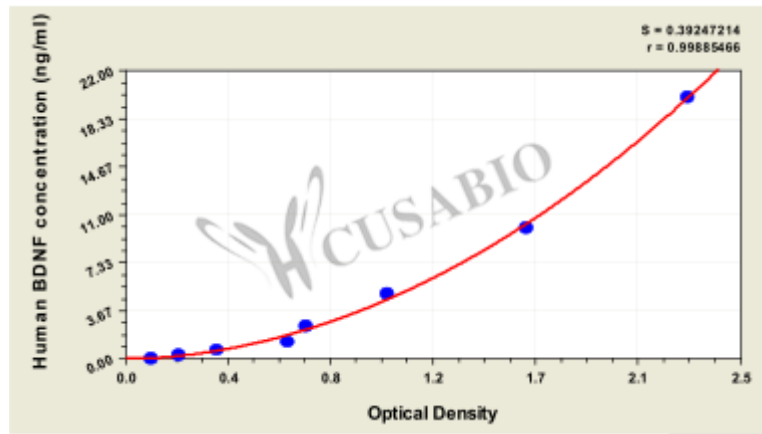
To assess the linearity of the assay, samples were spiked with high concentrations of human BDNF in various matrices and diluted with the Sample Diluent to

produce samples with values within the dynamic range of the assay.

	Sample	Serum(n=4)
1:1	Average %	91
	Range %	80-101
1:2	Average %	86
	Range %	82-104
1:4	Average %	97
	Range %	89-117
1:8	Average %	94
	Range %	88-102

Typical

These standard curves are provided for demonstration only. A standard curve should be generated for each set of samples assayed.



ng/ml	OD1	OD2	Average	corrected
0	0.114	0.118	0.116	
0.3125	0.216	0.238	0.227	0.111
0.625	0.400	0.352	0.376	0.260
1.25	0.652	0.672	0.662	0.546
2.5	0.721	0.745	0.733	0.617
5	1.018	1.101	1.060	0.944
10	1.695	1.546	1.621	1.505
20	2.253	2.275	2.264	2.148

Msds

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