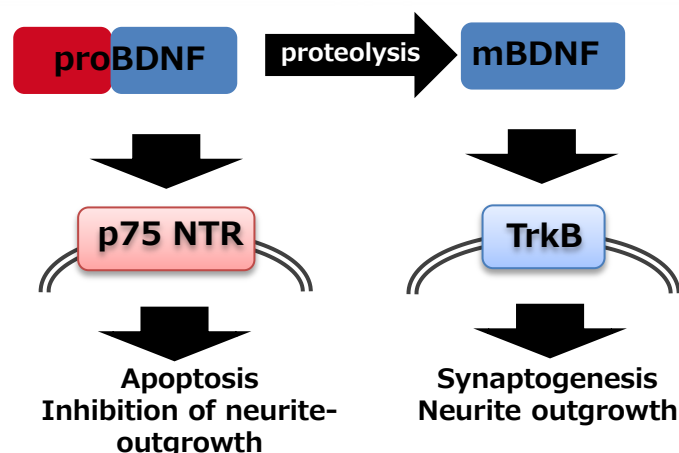


For neuroscience and biomarker research

# Mature BDNF ELISA Kit Wako

The Mature BDNF Kit Wako is designed for the quantitative detection and measurement of mature BDNF in biological fluids such as serum, and plasma. Brain-derived neurotrophic factor (BDNF) is a member of the NGF family of neurotrophic factors. BDNF is involved in neurogenesis and synaptogenesis and is expected as a biomarker for diseases of the nervous system. In addition, it has been reported to be related to heart disease, diabetes, gout, periodontal disease, stress, and exercise, etc. Therefore, BDNF is the target of research in a wide range of fields. BDNF has a precursor termed proBDNF, which is converted to mature BDNF (mBDNF) through the proteolytic removal of the N-terminal fragment by specific protease. There are different functions between mBDNF and proBDNF.



## Features

- **High sensitivity**
- **Detects mBDNF specifically**
- **Small sample volume**

## Components

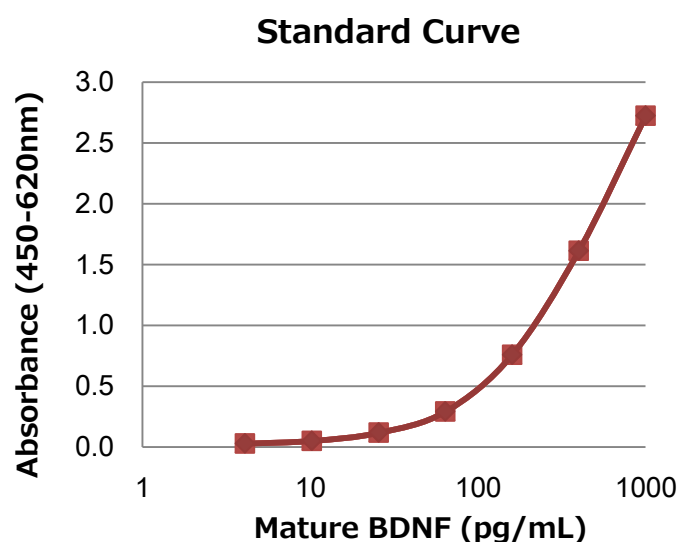
- |   |          |
|---|----------|
| (1) Antibody-coated Plate                       | 1Plate   |
| (2) Mature BDNF Standard                        | 1 bottle |
| (3) Buffer                                      | 60mL     |
| (4) Biotin-conjugated Antibody Solution         | 100μL    |
| (5) Peroxidase-conjugated Streptavidin Solution | 100μL    |
| (6) TMB Solution                                | 6mL      |
| (7) Stop Solution                               | 6mL      |
| (8) Wash Solution (10 x)                        | 100mL    |
| (9) Plate Seal                                  | 4 sheets |

## Performance

Standard curve range	4.1~1,000 pg/mL
Specificity	mBDNF*
Sample	Human serum and plasma **
Sample volume	Human serum : 10μL Human plasma : 5μL
Assay time	4 hours
Detection method	Colorimetric method

\*Approximately 10% reaction to proBDNF

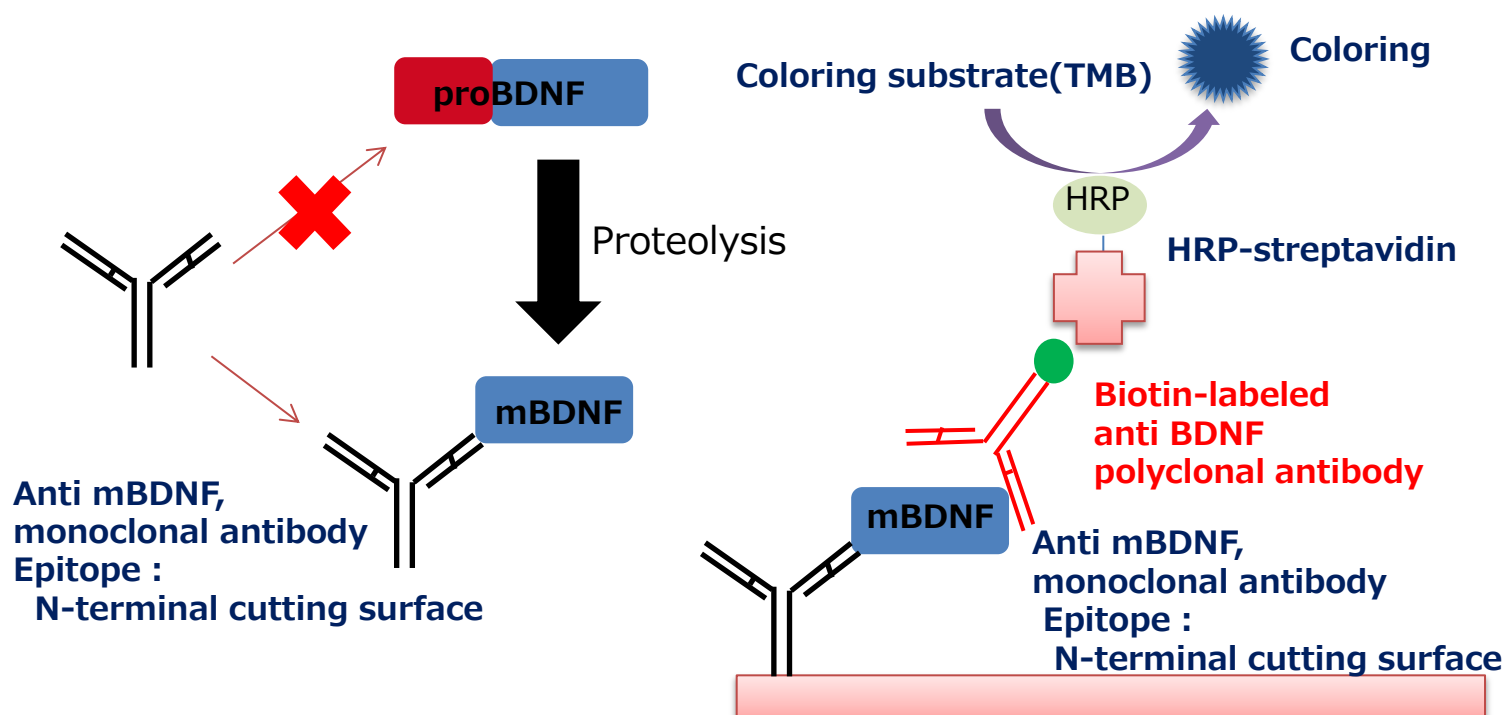
\*\*This kit is used antibody reacts with human, mouse and rat BDNF.



Product Name	Wako Cat. No	Pkg. Size	Grade	Storage Condition
<b>Mature BDNF ELISA Kit Wako</b>	296-83201	96 tests	For Immunochemistry	Keep at 2-10℃

## Assay principal

This kit is a sandwich ELISA using mBDNF monoclonal antibody and mBDNF polyclonal antibody. The kit has low cross-reactivity to proBDNF(approx. 10%) because the monoclonal antibody reacts with N-terminal cutting surface of mBDNF.

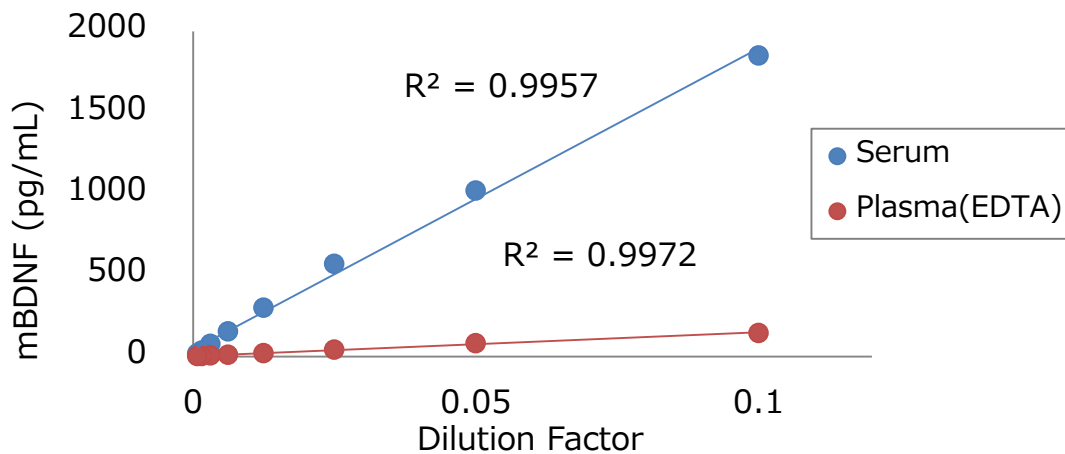


	Fujifilm Wako	Company A	Company B	Company C
<b>Cross-reactivity to proBDNF</b>	Approx. 10%	Approx. 10%	Approx. 15%	Approx. 50%
<b>Sensitivity</b> Lowest point of Calibration curve	4.1pg/mL	62.5pg/mL	15.6pg/mL	15.0pg/mL

## Spiked recovery test

Sample	Spike mBDNF (pg/mL)	Assay value (pg/mL)	Recovery volume (pg/mL)	Recovery (%)
Human serum ①	0	330	-	-
	100	423	93.0	93.0
	250	581	251	100
	500	817	487	97.4
Human serum ②	0	56.6	-	-
	50	106	49.4	98.8
	100	154	97.4	97.4
	200	257	200	100
	300	363	306	102
Sample	Spike mBDNF (pg/mL)	Assay value (pg/mL)	Recovery volume (pg/mL)	Recovery (%)
Human plasma ①	0	156	-	-
	100	252	96.0	96.0
	250	407	251	100
	500	661	505	101
Human plasma ②	0	66.0	-	-
	50	115	49.0	98.0
	100	164	98.0	98.0
	200	276	210	105
	300	369	303	101

## Dilution linearity



## Example of measurement -clinical sample -

Their serum mBDNF levels were measured by this kit. The samples were from healthy controls and patients with major depression, bipolar disorder, and schizophrenia.

### Healthy control(n=6)

No.	Sex	Age	Assay value (ng/mL)
1	F	48	14.5
2	F	50	22.8
3	F	54	20
4	F	47	18.5
5	F	42	13.8
6	F	60	19.1

### Major depression(n=6)

No.	Sex	Age	Assay value (ng/mL)
1	F	66	15.7
2	F	38	18.1
3	F	43	10.0
4	F	52	16.6
5	F	41	22.3
6	F	58	15.1

### Bipolar disorder(n=4)

No.	Sex	Age	Assay value (ng/mL)
1	F	46	16.5
2	F	52	20.9
3	F	52	11.5
4	F	52	11.5

### Schizophrenia(n=4)

No.	Sex	Age	Assay value (ng/mL)
1	F	36	17.9
2	F	53	23.0
3	F	55	14.6
4	F	51	10.8

Healthy control	Major depression	Bipolar disorder	Schizophrenia
18.1±3.41	16.3±4.02	15.1±4.53	16.6±5.17
(ng/mL)			

## Related products

Other ELISA kits for neuroscience research

### ■ For Alzheimer's disease research

A $\beta$  oligomer ELISA kit

Product Name	Wako Cat. No	Pkg. Size	Grade	Storage Condition
<b>High Molecular Amyloid <math>\beta</math> Oligomer ELISA Kit Wako Ver.2</b>	290-82001	96 tests	For Immunochemistry	Keep at 2-10°C

A $\beta$  ELISA kit

Product Name	Wako Cat. No	Pkg. Size	Grade	Storage Condition
<b>Human <math>\beta</math> Amyloid(1-40) ELISA Kit Wako</b>	292-62301	96 tests	For Immunochemistry	Keep at 2-10°C
<b>Human <math>\beta</math> Amyloid(1-40)ELISA Kit Wako II</b>	298-64601	96 tests	For Immunochemistry	Keep at 2-10°C
<b>Human/Rat <math>\beta</math> Amyloid(40)ELISA Kit Wako</b>	294-62501	96 tests	For Immunochemistry	Keep at 2-10°C
<b>Human/Rat <math>\beta</math> Amyloid(40)ELISA Kit Wako II</b>	294-64701	96 tests	For Immunochemistry	Keep at 2-10°C
<b>Human <math>\beta</math> Amyloid(1-42) ELISA Kit Wako</b>	298-62401	96 tests	For Immunochemistry	Keep at 2-10°C
<b>Human <math>\beta</math> Amyloid(1-42) ELISA Kit Wako, High Sensitive</b>	296-64401	96 tests	For Immunochemistry	Keep at 2-10°C
<b>Human/Rat <math>\beta</math> Amyloid(42)ELISA Kit Wako</b>	290-62601	96 tests	For Immunochemistry	Keep at 2-10°C
<b>Human/Rat <math>\beta</math> Amyloid(42) ELISA Kit Wako, High Sensitive</b>	292-64501	96 tests	For Immunochemistry	Keep at 2-10°C

Tau ELISA kit

Product Name	Wako Cat. No	Pkg. Size	Grade	Storage Condition
<b>Tau ELISA Kit Wako</b>	296-80401	96 tests	For Immunochemistry	Keep at 2-10°C
<b>Phosphorylated Tau T181 ELISA Kit Wako</b>	298-81701	96 tests	For Immunochemistry	Keep at 2-10°C

### ■ For sleep research

Product Name	Wako Cat. No	Pkg. Size	Grade	Storage Condition
<b>Orexin A ELISA Kit Wako</b>	293-79801	96 tests	For Immunochemistry	Keep at 2-10°C

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