Human BDNF Antibody Bead Kit
INFORMATION SHEET

Catalog #: LHC7071  Description: Human BDNF  Lot:* 366557

*Note: A letter at the end of the lot number signifies an additional packaging of this same lot.

Intended Use
This reagent set comprises the analyte specific components for the measurement of human BDNF in cerebrospinal fluid (CSF), tissue culture medium, serum, or plasma. The assay may be run alone or in combination with other Antibody Bead Kits from Invitrogen. For neuroscience applications (sample types include CSF and tissue culture medium containing markers such as Aβ and tau), buffer reagents needed to complete the assay are available under Catalog# LNB0001 (Invitrogen’s Neuroscience Buffer Reagent Kit). When working with serum, plasma, and other tissue culture medium samples, buffer reagents needed to complete the assay are available under Catalog# LMB0002 (Invitrogen’s Growth Factor Buffer Reagent Kit). These reagents are intended for use in the Luminex® 100™ or 200™ System only. This kit is configured for research use only and is not to be used in diagnostic procedures.

Reagents Provided
1. Antibody Bead Concentrate (10x):
   Catalog #: LM125  Description: Ms x Hu BDNF  Lot: 366616  Size: 0.25 mL-100 tests
   Bead Region: 57  Form: 0.25 mL 10x bead concentrate solution in storage buffer. Contains 7.5 mM sodium azide as preservative.
   Storage: Store at 2 to 8°C in the dark, until the expiration date indicated on the kit.

2. Biotinylated Antibody Concentrate (10x):
   Catalog #: BN125  Description: Ms x Hu BDNF biotin  Lot: 366617  Size: 1 mL-100 tests
   Form: 1 mL of a 10x stock of Biotinylated Antibody Concentrate in Biotin Diluent. Contains 15 mM sodium azide as preservative. Concentration of antibody is matched to this lot of beads. Do not mix lots of Coated Beads and Detection Antibody.
   Storage: Store at 2 to 8°C until the expiration date indicated on the kit.

3. Human Neurotrophic Factor 3-plex Standard (BDNF, GDNF, PDGF-BB) (2 vials):
   Catalog #: SM042  Description: Hu Neurotrophic Factor 3-plex Std  Lot: 310736  Size: Single use
   Form: Lyophilized. The BDNF protein in this standard has been calibrated against highly purified recombinant protein. See the Product Insert included in the Buffer Reagent Kit for further information.
   Storage: Store at 2 to 8°C. Use within 1 hour after reconstitution. Discard immediately after use.

Concentration of Reconstituted Standard**:
   Hu PDGF-BB (7,000 pg/mL)  Hu BDNF (7,650 pg/mL)  Hu GDNF (32,580 pg/mL)

**Important note: The concentrations of reconstituted standards are lot-specific. Please verify all concentration values entered in data analysis software.

Reconstitution: Reconstitute with 1 mL Assay Diluent when measuring BDNF in CSF, serum, or plasma samples. For tissue culture supernatant samples, reconstitute the standard in 1 mL of a solution consisting of 50% Assay Diluent + 50% sample matrix. Allow standard to rehydrate for approximately 10 minutes before further dilution.

Recommended Starting Concentration for Standard Curve: Upon reconstitution, the starting concentrations of standard are the values cited above. Make serial 1:3 dilutions in Assay Diluent or other appropriate matrix. Use 50 µL per assay with the Neuroscience assay format. Use 100 µL per assay with the Growth Factor assay format. This standard may be combined with up to three other standards in the development of multiplexed assays. See the Product Insert included in the Buffer Reagent Kit for further information.

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Performance Characteristics

Analytical Sensitivity: The minimum detectable dose of Hu BDNF with the Neuroscience Buffer Reagent Kit is <35 pg/mL. The minimum detectable dose of Hu BDNF with the Growth Factor Reagent Kit is <10 pg/mL. Minimal detectable dose was determined by adding two standard deviations to the mean FI obtained when the zero standard was assayed 24 or 30 times, in the Neuroscience assay format or Growth Factor assay format, respectively.

![Human BDNF Full Standard Range](image1)

![Human BDNF Low End Range](image2)

Typical Standard Curve

Specificity: Buffered solutions of a panel of substances at 10 or 50 ng/mL were assayed with the Invitrogen Human BDNF Antibody Bead Kit. The following substances were tested and all were found to have no cross-reactivity: human IL-1α, IL-1β, IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-10, IL-12, IL-13, IL-15, IL-17, IFN-α, IFN-γ, GM-CSF, MCP-1, MIG, MIP-1α, MIP-1β, Eotaxin, RANTES, IP-10, TNF-R1, TNF-R2, DR4, DR5, IL-1RA, IL-2R, sIL-6R, EGF, FGF basic, G-CSF, VEGF, GDNF and PDGF-BB.

Precision:

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<thead>
<tr>
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<th>Intra-assay (n=16)</th>
<th>Inter-assay (n=32)</th>
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</thead>
<tbody>
<tr>
<td>Mean (pg/mL)</td>
<td>2287.4</td>
<td>2189.2</td>
</tr>
<tr>
<td>SD</td>
<td>115.6</td>
<td>197.9</td>
</tr>
<tr>
<td>%CV</td>
<td>5.05</td>
<td>9.04</td>
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Linearity: Human CSF was spiked with human BDNF and serially diluted in Assay Diluent over the range of the assay. Linear regression analysis of sample versus the expected concentration yielded a correlation coefficient of 0.99. Human serum was spiked with human BDNF and serially diluted in Assay Diluent over the range of the assay. Linear regression analysis of samples versus the expected concentration yielded a correlation coefficient of 0.97. Tissue culture medium containing 10% fetal calf serum was spiked with human BDNF and serially diluted in a solution of 50% Assay Diluent and 50% tissue culture medium. Linear regression analysis yielded a correlation coefficient of 0.99.

Recovery:

Human CSF averaged 111.1%.
Human serum averaged 96.3%.
Human heparin plasma averaged 97.5%.
Human citrate and EDTA plasma are not recommended.
Tissue culture medium containing 10% fetal calf serum averaged 101.7%.

By purchasing this Kit, which contains fluorescently labeled microsphere beads authorized by Luminex® Corporation ("Luminex®"), you, the customer, acquire the right under Luminex's patent rights to use this Kit or any portion of this Kit, including without limitation the microsphere beads contained herein, only with Luminex's laser based fluorescent analytical test instrumentation marketed under the name Luminex® 100™ or 200™. This product is covered by one or more of the following U.S. patents: 6,046,807.

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