

# StemBeads® BDNF

## Product Information Sheet



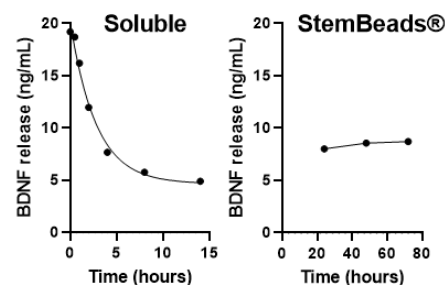
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### Product Description

StemBeads® BDNF is a patented growth factor supplement that offers a novel way to culture cells with native Brain Derived Neurotrophic Factor more efficiently, with greater control and fewer medium changes. BDNF is key for supporting neural progenitor cells (NPCs) and neuronal differentiation. StemBeads® BDNF are microbeads composed of an FDA approved, biodegradable PLGA polymer that is loaded with native, non-mutant recombinant human BDNF and release the encapsulated protein at a constant rate. Controlled delivery and stable levels overcome the 2 hour half-life (Figure 1) of BDNF and improve cell cultures while saving researchers valuable time and resources.

StemBeads® BDNF has been tested in multiple neuronal base media, including neural progenitor expansion medium (NPEM), with enhanced cellular profiles. In these cases, StemBeads® BDNF were used with and without StemBeads® GDNF.

**Figure 1**



### Product Information

Catalog #	Product Name	Storage	Expiration	Average Particle Size	Reconstitution
SBBD1	StemBeads® BDNF	4°C	6 months, as specified on label	10 ± 3 µm diameter	Ready-to-use solution in DMEM/F12

### Directions for Use

#### Preparation of Media with StemBeads® BDNF

1. Mix vial of StemBeads® BDNF thoroughly by vortexing or pipetting prior to use.
2. Add 10 µL of StemBeads® BDNF per 1 mL of medium. This will provide cells with stable 10 ng/mL BDNF. See back for additional release data.

#### Culturing with StemBeads® BDNF

1. Passage your NPCs according to your typical protocol.
2. The next day, remove the NPC medium and replace with StemBeads® BDNF supplemented neuronal medium. StemBeads® BDNF can be added to the neuronal medium of your choice. Be sure to mix media containing StemBeads® BDNF well before plating into culture dish.
3. Change media 1-2 times per week depending on cell density and culture conditions. Cells should be passaged as required depending on density and culture method.

Note: Washing is highly recommended prior to each feed to remove cell debris and remaining beads.

### Recommended Culture Schedule



Note: Different cell lines, culture densities, and media may require adjusted schedules. Repeat refeeding as needed.

Please reach out to support@stemcultures.com for ordering and technical support.

### Release Data

StemBeads® BDNF release in media can be adjusted slightly based on the amount of StemBeads® added or the amount of medium used. We recommend a release of 10 ng/mL, however, to fit other needs, the release can be adjusted slightly. See the chart below for reference.

Volume of StemBeads® BDNF	Volume of Medium Added	BDNF Release in Volume of Medium Added
5 µL	1 mL	5 ng/mL
10 µL	1 mL	10 ng/mL
20 µL	1 mL	20 ng/mL
10 µL	0.5 mL	20 ng/mL
10 µL	1 mL	10 ng/mL
10 µL	2 mL	5 ng/mL