

**Synonym**

BDNF, ANON2, BULN2, Abrineurin

Source

Human BDNF Protein (HEK293), premium grade(BDF-H5219) is expressed from human 293 cells (HEK293). It contains AA His 129 - Arg 247 (Accession # [P23560-1](#)).

Predicted N-terminus: His 129

It is produced under our rigorous quality control system that incorporates a comprehensive set of tests including sterility and endotoxin tests. Product performance is carefully validated and tested for compatibility for cell culture use or any other applications in the early preclinical stage. When ready to transition into later clinical phases, we also offer a custom GMP protein service that tailors to your needs. We will work with you to customize and develop a GMP-grade product in accordance with your requests that also meets the requirements for raw and ancillary materials use in cell manufacturing of cell-based therapies.

Molecular Characterization

BDNF(His 129 - Arg 247)
P23560-1

This protein carries no "tag".

The protein has a calculated MW of 13.5 kDa. The protein migrates as 13-15 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

EndotoxinLess than 0.01 EU per μ g by the LAL method / rFC method.**Sterility**

Negative

Mycoplasma

Negative.

Purity

>95% as determined by SDS-PAGE.

FormulationLyophilized from 0.22 μ m filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

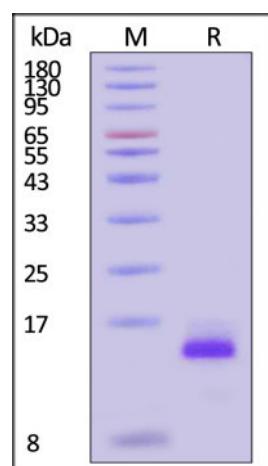
Storage

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

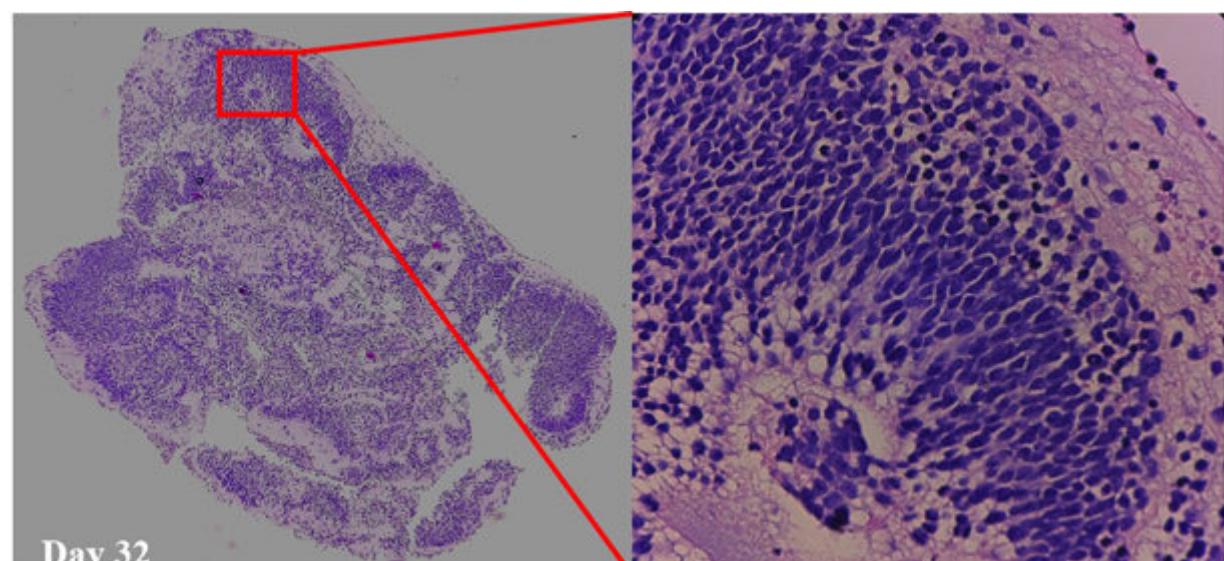
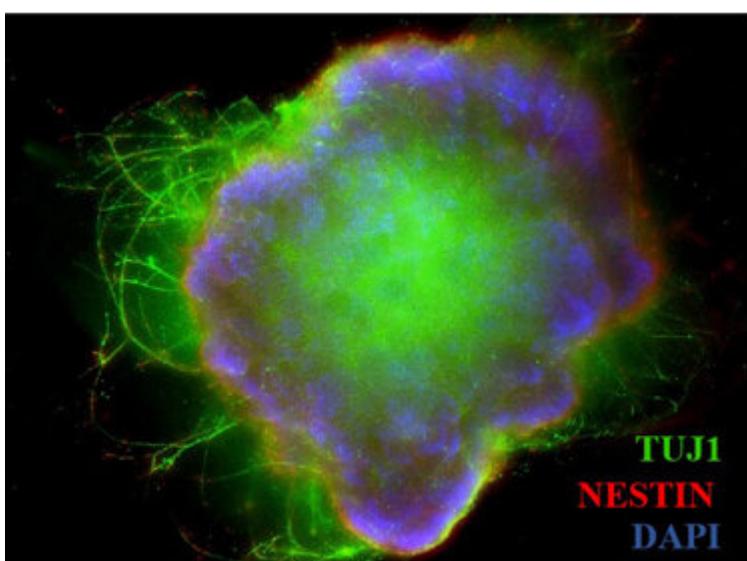
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE

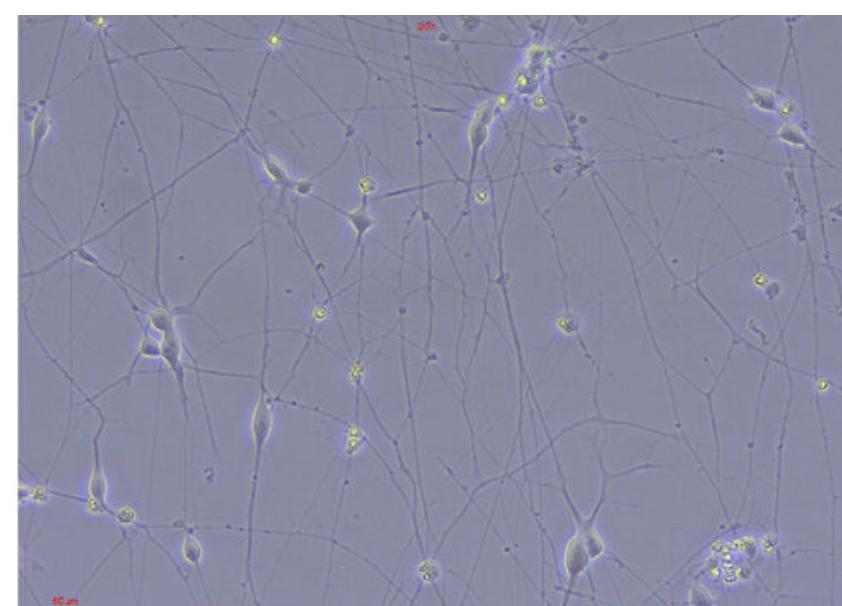
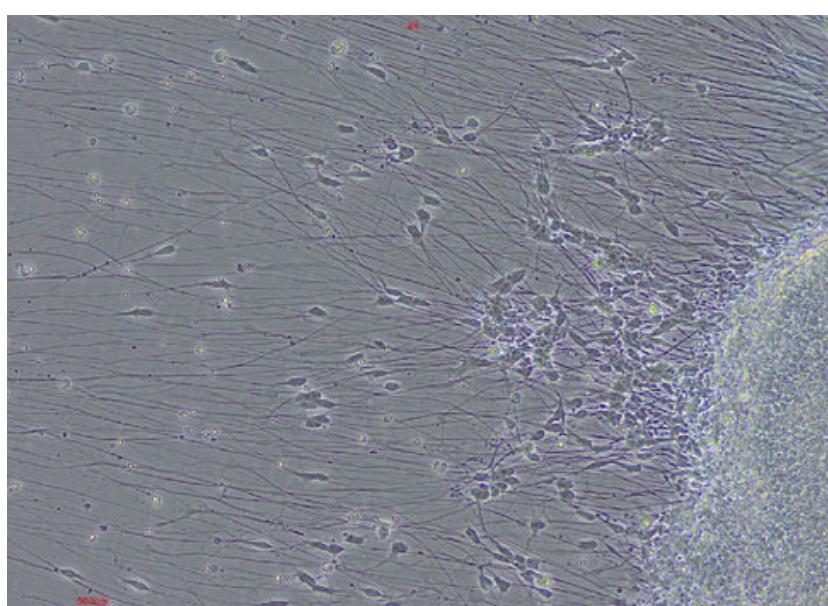
Human BDNF Protein (HEK293), premium grade on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

**Discounts, Gifts,
and more!**

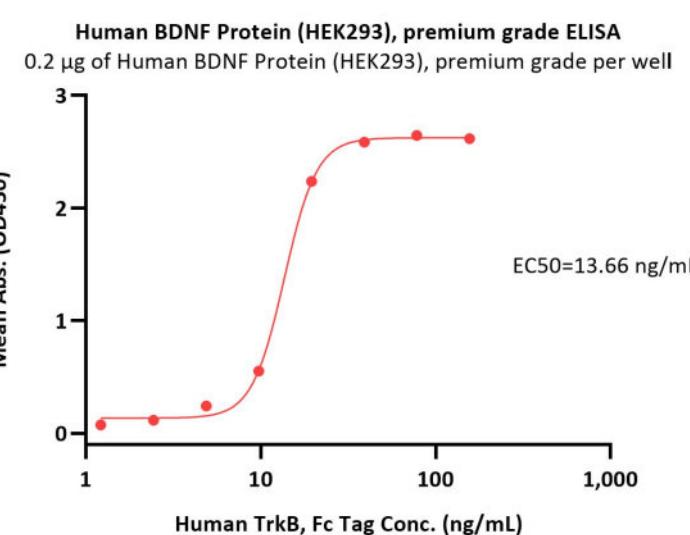
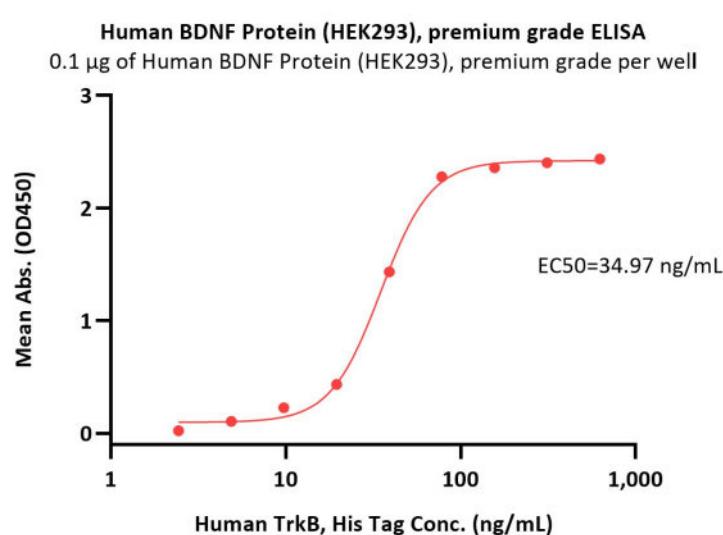
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Bioactivity-Organoid Culture


iPSC derived human brain organoids, expressing neuron marker TUJ1 (green) and neuron stem cell marker NESTIN (red), were cultured for 36 days with BDNF (Cat. No. BDF-H5219) and GDNF (Cat. No. GDF-H5219). H&E staining showed brain organoids had classic neuron stem cell rosettes histology.

Bioactivity-Stem Cell Culture


iPSC derived neurons forming axon net-works were cultured with differentiation protocol, including BDNF (Cat. No. BDF-H5219) and GDNF (Cat. No. GDF-H5219).

Bioactivity-ELISA


Immobilized Human BDNF Protein (HEK293), premium grade (Cat. No. BDF-H5219) at 1 µg/mL (100 µL/well) can bind Human TrkB, His Tag (Cat. No. NT2-H5228) with a linear range of 2-78 ng/mL (QC tested).

Immobilized Human BDNF Protein (HEK293), premium grade (Cat. No. BDF-H5219) at 2 µg/mL (100 µL/well) can bind Human TrkB, Fc Tag (Cat. No. NT2-H5254) with a linear range of 1-20 ng/mL (Routinely tested).

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Background

Brain-derived neurotrophic factor (BDNF) along with nerve growth factor (NGF), neurotrophin-3 (NT-3), and neurotrophin-4/5 (NT-4/5) are members of the neurotrophin family of trophic factors. The neurotrophins play essential roles in the development, survival, and function of a wide range of neurons in both the peripheral and central nervous systems. The neurotrophins interact with two cell surface receptors, the low affinity P75 receptor and the Trk family of high affinity tyrosine kinase receptors. NGF preferentially binds TrkA, BDNF and NT4/5 bind TrkB, and NT-3 binds TrkC (and TrkA to a lesser extent).

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