

Datasheet for 009-001-C27

BDNF Human Recombinant Protein**Overview**

Description:	BDNF Human Recombinant Protein - 009-001-C27
Item No.:	009-001-C27
Size:	10 µg
Applications:	SDS-PAGE, Other
Origin:	Human
Expressed in:	E. coli

Product Details

Background: BDNF is a member of the nerve growth factor family of trophic factors. In the brain BDNF has a trophic action on retinal, cholinergic, and dopaminergic neurons, and in the peripheral nervous system it acts on both motor and sensory neurons. Some protein domains of BDNF are identical with those of NGF and another neurotrophic factor, designated NT-3 (neurotrophin-3). It exists as monomers and homodimers, and binds to NTRK2/TRKB. Polyclonal antibodies raised against murine NGF have been shown to cross-react with both NT-3 and BDNF. The propeptide is N-glycosylated and glycosulfated. BDNF is converted into mature BDNF by plasmin (PLG). It is expressed in brain, and highly expressed in hippocampus, amygdala, cerebral cortex and cerebellum; it is also expressed in heart, lung, skeletal muscle, testis, prostate and placenta. Recombinant Human Brain-Derived Neurotrophic Factor produced in E.coli is a homodimer, non-glycosylated, polypeptide chain containing 2 x 119 amino acids and having a total molecular mass of 26,984 Daltons.

Synonyms:	Brain-derived neurotrophic factor, Abreinerin cytokine
Species of Origin:	Human
Expressed in:	E. coli
Type:	Recombinant Protein
Low Endotoxin:	Yes

Target Details

Gene Name:	BDNF
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Purity/Specificity: Purity was determined to be greater than 97% as determined by analysis by RP-HPLC and by reducing and non-reducing SDS-PAGE against a known standard.

Endotoxin level as determined by kinetic LAL analysis: 0.05 EUs/ μ g protein.

Relevant Links:

- [UniProtKB - P23560](#)
- [NCBI - 3YAWJEK2011](#)

Application Details

Tested Applications: SDS-PAGE

Suggested Applications: Other (Based on references)

Application Note: BDNF has been tested by SDS-PAGE and is suitable as a control for polyclonal or monoclonal anti-BDNF in immunological assays.

Assay Dilutions: All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.

Other: Biological Activity: Proliferation of a neuroblastoma cell line stably expressing TrkB (BR6) ED50 \leq 40 ng/mL ($\geq 2.5 \times 10^4$ units/mg). Endotoxin Level: Measured by LAL is <0.01 ng/ μ g or <0.1 EU/ μ g.

Formulation

Physical State: Lyophilized

Concentration: 0.1 mg/mL by UV absorbance at 280 nm

Buffer: 0.1% Trifluoroacetic acid

Preservative: None

Stabilizer: None

Reconstitution Volume: 10 μ l (10-100 μ l)

Reconstitution Buffer: Restore with deionized water (or equivalent)

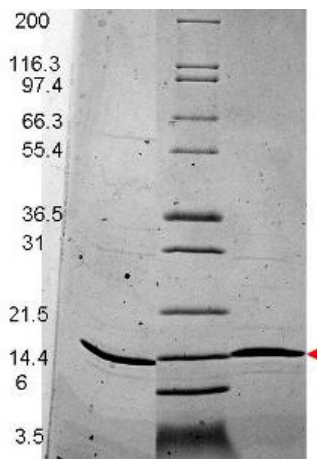
Shipping & Handling

Shipping Condition: Ambient

Storage Condition: Store vial at -20° C prior to restoration. Dilute only prior to immediate use. Maintain sterility. This product DOES NOT contain preservative. DO NOT VORTEX. We recommend adding a carrier protein such as HSA or BSA to 0.1% (i.e. 1.0 mg/mL) . For best results aliquot contents and freeze at -20° C or colder. Avoid cycles of freezing and thawing. Centrifuge vial before each opening to dislodge contents from the cap and to clarify if contents are not clear after standing at room temperature.

Expiration: Expiration date is six (6) months from date of receipt.

Images



SDS-PAGE

SDS-PAGE shows band corresponding to BDNF (1 μ g) in lane 1 (unreduced) and lane 3 (reduced, arrowhead). Molecular weight estimation was made by comparison to pre-stained MW markers, lane 2.

References

- Chowdhury MA et al. Isolation and Identification of the High-Affinity DNA Aptamer Target to the Brain-Derived Neurotrophic Factor (BDNF). *ACS Chem Neurosci.* (2024)

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.