# Product Datasheet

## BDNF Antibody
## NB100-98682

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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**Publications: 37**

Protocols, Publications, Related Products, Reviews, Research Tools and Images at:
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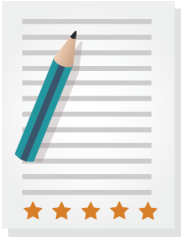
Updated 9/9/2025 v.20.1





# NB100-98682

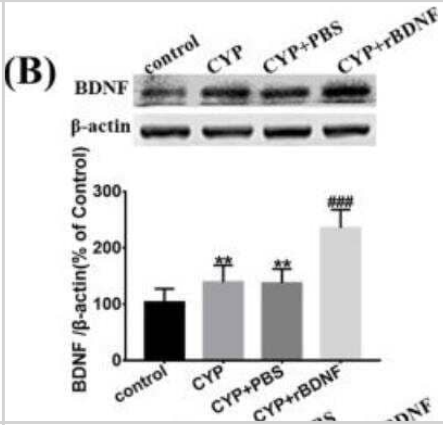
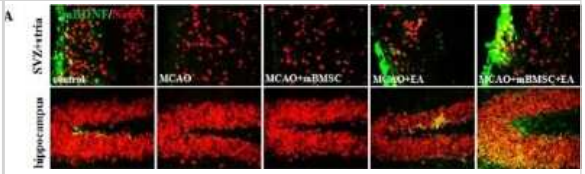
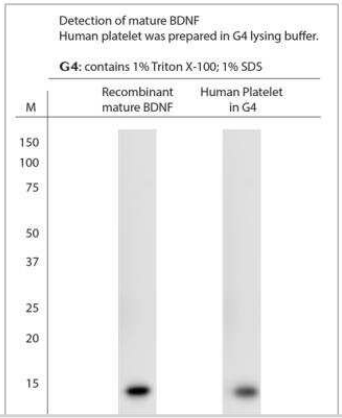
BDNF Antibody

| Product Information | |
|---|---|
| **Unit Size** | 0.1 ml |
| **Concentration** | This product is unpurified. The exact concentration of antibody is not quantifiable. |
| **Storage** | Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles. |
| **Clonality** | Polyclonal |
| **Preservative** | No Preservative |
| **Reconstitution Instructions** | Reconstitute in 0.1 ml of sterile water. Centrifuge to remove any insoluble material. Glycerol may be added (1:1) for additional stability. Please note the sample size is provided in reconstituted format. |
| **Isotype** | IgG |
| **Purity** | Unpurified |
| **Buffer** | Lyophilized from whole antisera |
| **Target Molecular Weight** | 28 kDa |

| Product Description | |
|---|---|
| **Description** | Novus Biologicals Rabbit BDNF Antibody (NB100-98682) is a polyclonal antibody validated for use in IHC, WB and ICC/IF. Anti-BDNF Antibody: Cited in 36 publications. All Novus Biologicals antibodies are covered by our 100% guarantee. |
| **Host** | Rabbit |
| **Gene ID** | 627 |
| **Gene Symbol** | BDNF |
| **Species** | Human, Mouse, Rat, Zebrafish |
| **Reactivity Notes** | Zebrafish reactivity reported in scientific literature (PMID: 30222997). |
| **Specificity/Sensitivity** | Specific for mature BDNF. |
| **Immunogen** | A synthetic peptide from n-terminal region of human mature BDNF conjugated to blue carrier protein was used as the antigen. The peptide is homologous in many other species including rat, mouse, zebra fish and xenopus. |

| Product Application Details | |
|---|---|
| **Applications** | Western Blot, Immunohistochemistry-Paraffin, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry |
| **Recommended Dilutions** | Western Blot 1:1000, Immunohistochemistry 1:1000, Immunocytochemistry/ Immunofluorescence 1:10-1:500, Immunohistochemistry-Paraffin 1:1000 |
| **Application Notes** | Use in IHC-P reported in scientific literature (PMID: 30222997). ICC/IF reported in scientific literature (PMID: 27914953). |

## Images

| | |
|---|---|
| Western Blot: BDNF Antibody [NB100-98682] - BDNF lowered the mechanical withdrawal threshold further and promoted activation of astrocytes and microglia, and enhanced the p38/JNK pathway to aggravate the release of IL-1beta and TNF-alpha in the SDH of CYP-induced cystitis. Western blots showing the expression of BDNF was further upregulated when compared with the CYP + PBS group. Data of mechanical withdrawal threshold were analyzed using a two-way analysis of variance (ANOVA) followed by the Sidak's multiple comparisons test. All data were calculated as mean +/- SEM (n = 10 per group). **p < 0.01, ***p < 0.001 vs. the control group. #p < 0.05, ##p < 0.01, ###p < 0.001 vs. the CYP + rBDNF group. $p < 0.05, $$p < 0.01, $$$p < 0.001 vs. the CYP + PBS group. |  |
| Immunohistochemistry: BDNF Antibody [NB100-98682] - Effects of mBMSC and EA treatment on the expression of mBDNF and NT4 in neurons. Photomicrographs for mBDNF/NeuN or NT4/NeuN double-positive cells in the striatum and hippocampus (n = 5). The number of mBDNF/NeuN double-positive cells in the SVZ + striatum and hippocampus was significantly higher in the EA-treated MCAO group and the combined mBMSC + EA-treated MCAO group, compared to the number in the other groups. The number of NT4/NeuN double-positive cells in the hippocampus was significantly higher in the EA-treated MCAO group than in the vehicle-treated MCAO group. #p < 0.05 and ##p < 0.01 versus control group; *p < 0.05, **p < 0.01, and ***p < 0.001 versus vehicle-treated MCAO group; &&p < 0.01 versus mBMSC-treated MCAO group. Scale bar = 100 um. Image collected and cropped by CiteAb from the following publication (www.nature.com/articles/s41598-018-20481-3) licensed under a CC-BY license. |  |
| Western Blot: BDNF Antibody [NB100-98682] - Human platelet lysate and recombinant mature BDNF. Blocking: 1% LFDM for 30 min at RT; primary antibody (1:1000) incubated at 4C overnight. |  |
| Immunohistochemistry-Paraffin: BDNF Antibody [NB100-98682] - Mouse hippocampus. The animal was perfused at a pressure of 130 mmHg with 300 ml 4% FA before being processed for paraffin embedding. HIER: Tris-EDTA, pH 9 for 20 min. Blocking: 0.2% LFDM in TBST filtered thru 0.2 um. Detection was done using Novolink HRP polymer from Leica following manufacturers instructions; DAB chromogen: Candela DAB chromogen. Primary antibody: dilution 1: 1000, incubated 30 min at RT. Sections were counterstained with Harris Hematoxylin. |  |

| | |
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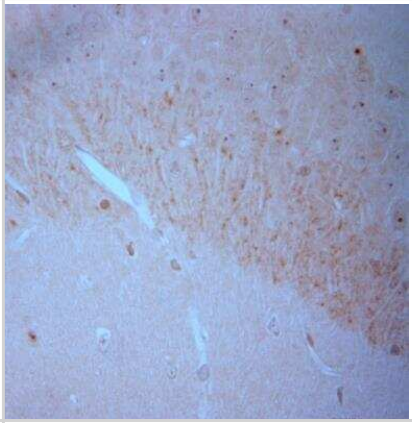
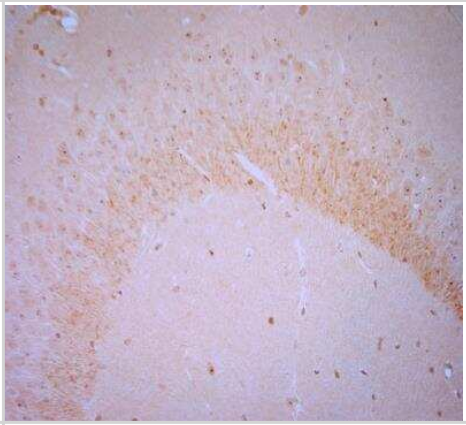
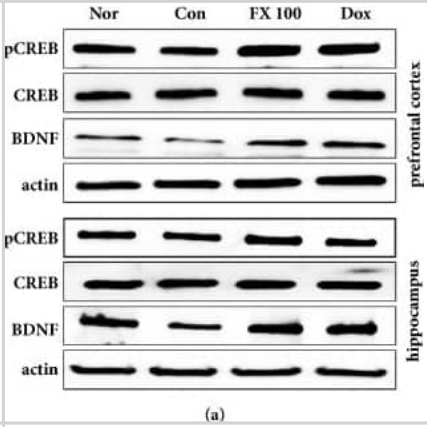
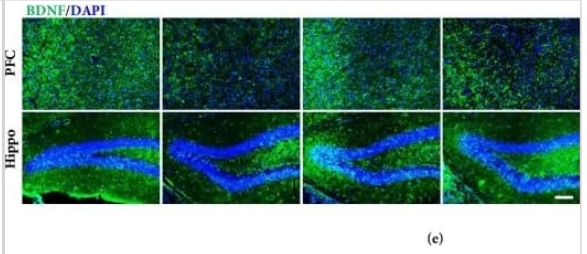
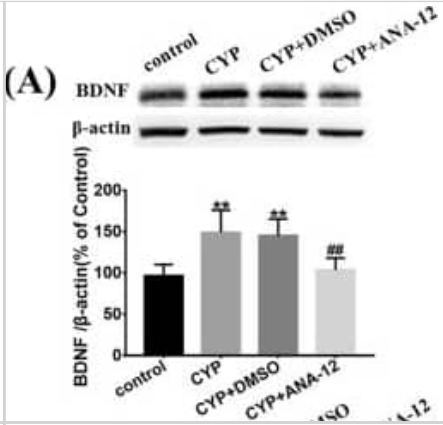
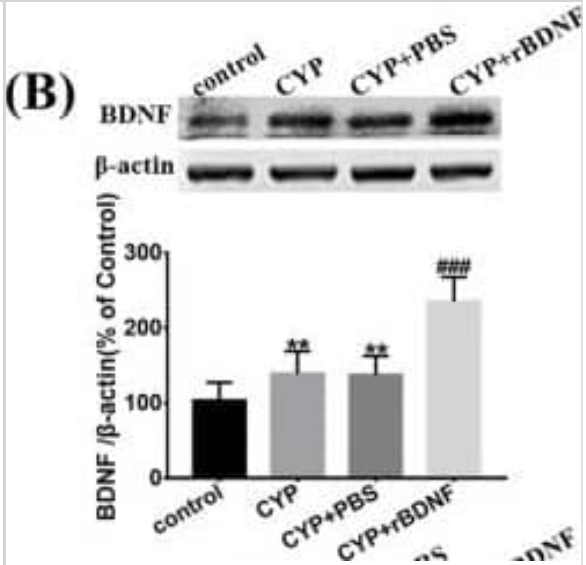
| Immunohistochemistry-Paraffin: BDNF Antibody [NB100-98682] - Mouse hippocampus. The animal was perfused at a pressure of 130 mmHg with 300 ml 4% FA before being processed for paraffin embedding. HIER: Tris-EDTA, pH 9 for 20 min. Blocking: 0.2% LFDM in TBST filtered thru 0.2 um. Detection was done using Novolink HRP polymer from Leica following manufacturers instructions; DAB chromogen: Candela DAB chromogen. Primary antibody: dilution 1: 1000, incubated 30 min at RT. Sections were counterstained with Harris Hematoxylin. |  |
| Immunohistochemistry-Paraffin: BDNF Antibody [NB100-98682] - Mouse hippocampus. The animal was perfused at a pressure of 130 mmHg with 300 ml 4% FA before being processed for paraffin embedding. HIER: Tris-EDTA, pH 9 for 20 min. Blocking: 0.2% LFDM in TBST filtered thru 0.2 um. Detection was done using Novolink HRP polymer from Leica following manufacturers instructions; DAB chromogen: Candela DAB chromogen. Primary antibody: dilution 1: 1000, incubated 30 min at RT. Sections were counterstained with Harris Hematoxylin. |  |
| Western Blot: BDNF Antibody [NB100-98682] - Effect of treatment with FX extract on CREB/BDNF signaling. (a-c) Differences in the phosphorylation of CREB & expression of BDNF between groups in the PFC & hippocampus (n = 3-4). (d, e) pCREB & BDNF immunofluorescence was assessed in the PFC & hippocampus (n = 3-4). Mean ± SD. #P < 0.05 versus normal group; □P < 0.05 & □□P < 0.01 versus control group. Scale bar = 200 μm. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/30065945), licensed under a CC-BY license. Not internally tested by Novus Biologicals. |  |
| Western Blot: BDNF Antibody [NB100-98682] - Effect of treatment with FX extract on CREB/BDNF signaling. (a-c) Differences in the phosphorylation of CREB & expression of BDNF between groups in the PFC & hippocampus (n = 3-4). (d, e) pCREB & BDNF immunofluorescence was assessed in the PFC & hippocampus (n = 3-4). Mean ± SD. #P < 0.05 versus normal group; □P < 0.05 & □□P < 0.01 versus control group. Scale bar = 200 μm. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/30065945), licensed under a CC-BY license. Not internally tested by Novus Biologicals. |  |

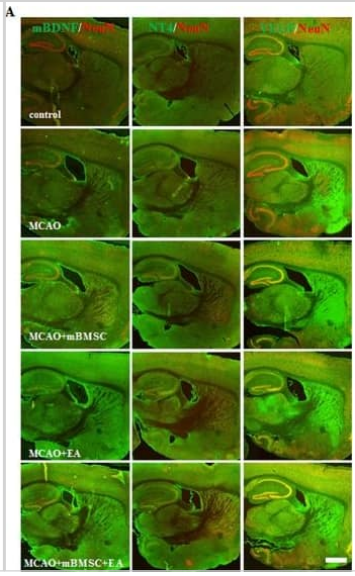
Western Blot: BDNF Antibody [NB100-98682] - Antagonized TrkB could restrain the activation of astrocytes & microglia & supress the p38/JNK pathway to alleviate the release of IL-1β & TNF-α in the SDH of CYP-induced cystitis. Western blots showed that the overexpression of a BDNF, b TrkB, cp-TrkB, d Iba1, e GFAP, fp-p38, gp-JNK, h TNF-α, & i IL-1β were downregulated in comparison to the CYP + DMSO group after ANA-12 treatment. All data were calculated as mean ± SEM (n = 5 per group). **p < 0.01, ***p < 0.001 vs. control group. ##p < 0.01, ###p < 0.001 vs. CYP + ANA-12 group Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/31931832), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



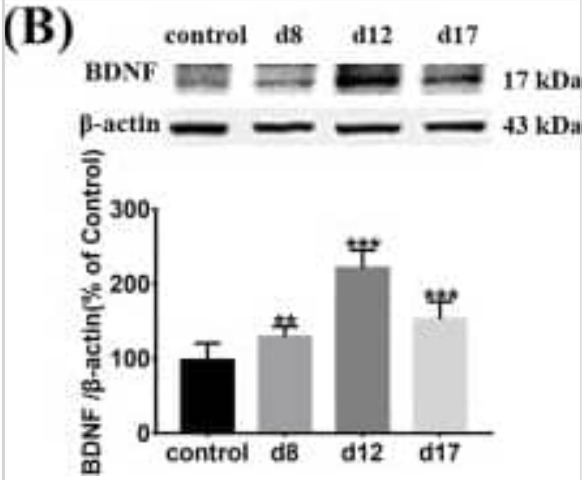

Western Blot: BDNF Antibody [NB100-98682] - BDNF lowered the mechanical withdrawal threshold further & promoted activation of astrocytes & microglia, & enhanced the p38/JNK pathway to aggravate the release of IL-1β & TNF-α in the SDH of CYP-induced cystitis. a BDNF treated every other day after CYP injection could further lower the mechanical withdrawal threshold & suppress the retrieval of mechanical threshold when compared with the CYP + PBS group. After the exogenous BDNF injection, Western blots showing the expression of b BDNF, c TrkB, dp-TrkB, e Iba1, f GFAP, gp-p38, hp-JNK, i TNF-α, & j IL-1β were all further upregulated when compared with the CYP + PBS group. Data of mechanical withdrawal threshold were analyzed using a two-way analysis of variance (ANOVA) followed by the Sidak's multiple comparisons test. All data were calculated as mean ± SEM (n = 10 per group). **p < 0.01, ***p < 0.001 vs. the control group. #p < 0.05, ##p < 0.01, ###p < 0.001 vs. the CYP + rBDNF group. $p < 0.05, $$p < 0.01, $$$p < 0.001 vs. the CYP + PBS group Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/31931832), licensed under a CC-BY license. Not internally tested by Novus Biologicals.




Immunohistochemistry: BDNF Antibody [NB100-98682] - Effects of mBMSC & EA treatment on the expression of trophic factors. (A) Photomicrographs & (B–D) histograms for mBDNF, NT4, & VEGF expression (n = 4–5). mBDNF expression was markedly increased by treatment with mBMSC and/or EA compared to vehicle treatment. mBDNF expression levels were higher in the EA-treated MCAO group than in the mBMSC-treated MCAO group. NT4 expression in the SVZ & hippocampus was significantly higher in the combined mBMSC & EA treatment group than in the other groups. VEGF expression in the hippocampus was markedly higher in the mBMSC treatment group than in the vehicle-treated MCAO group. #p < 0.05, ##p < 0.01, & ###p < 0.001 versus control group; *p < 0.05, **p < 0.01, & ***p < 0.001 versus vehicle-treated MCAO group; &p < 0.05, &&p < 0.01, & &&&p < 0.001 versus mBMSC-treated MCAO group; Scale bar = 1 mm. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/29391466), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: BDNF Antibody [NB100-98682] - The expression of BDNF-TrkB signaling in the SDH of CYP-induced cystitis. a Changes of the mechanical threshold in CYP-induced cystitis model. Compared to that in the control group, the mechanical threshold of the cystitis group decreased significantly after the CYP injection & remained low until day 17, & the minimum threshold value was reached on day 12. The expression of b BDNF, c TrkB, & dp-TrkB were evaluated by western blots. Compared to the control group, they were upregulated on days 8, 12, & 17. e Immunofluorescence double staining assay of BDNF & p-TrkB in the SDH. BDNF & p-TrkB (red), NeuN, GFAP, & OX-42( green), co-localization (yellow). BDNF was mainly colocalized in neurons which mainly located in Laminate II to IV. & TrkB receptors expressed in neurons, microglia, & astrocytes. The white dotted lines in picture “BDNF/NeuN” showed the laminate of the SDH according to Rexed & Steiner. Scale bar = 100 μm. All data were calculated as mean ± SEM (n = 5 per group). *p < 0.05, ** p < 0.01, *** p < 0.001 vs. the control group Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/31931832), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



## Publications


Doboszewska U, Soca?a K, Pier□g M et al. Dietary Zinc Differentially Regulates the Effects of the GPR39 Receptor Agonist, TC-G 1008, in the Maximal Electroshock Seizure Test and Pentylenetetrazole-Kindling Model of Epilepsy Cells 2023-01-09 [PMID: 36672199] (Western Blot, Mouse)

Filimonova EA, Pashkov AA, Moysak GI et al. Brain but not serum BDNF levels are associated with structural alterations in the hippocampal regions in patients with drug-resistant mesial temporal lobe epilepsy Frontiers in Neuroscience 2023-07-19 [PMID: 37539386] (Western Blot, Mouse)

Doboszewska U, Soca?a K, Pieróg M et al. TC-G 1008 facilitates epileptogenesis by acting selectively at the GPR39 receptor but non-selectively activates CREB in the hippocampus of pentylenetetrazole-kindled mice Cellular and Molecular Life Sciences 2023-05-01 [PMID: 37185787] (Western Blot, Mouse)

Ferguson L, Giza CC, Serpa RO et al. Sex Differences in Neurophysiological Changes Following Voluntary Exercise in Adolescent Rats Frontiers in Neurology 2021-07-22 [PMID: 34367052] (Western Blot, Mouse)

Wu CY, Zhang Y, Howard P et Al. ACSL3 is a promising therapeutic target for alleviating anxiety and depression in Alzheimer's disease Geroscience 2024-11-13 [PMID: 39532829]

Wang M, Wang T, Ji H et al. Modulation effect of non-invasive transcranial ultrasound stimulation in an ADHD rat model Journal of neural engineering 2023-01-18 [PMID: 36599159]

Gao Q, Gao Z, Su M et al. Umbilical Cord Mesenchymal Stem Cells Overexpressing Heme Oxygenase-1 Promotes Symptoms Recovery in Cystitis Rats by Alleviating Neuroinflammation Stem cells international 2023-11-14 [PMID: 38020203]

Tikhonova, MA;Shvaikovskaya, AA;Zhanaeva, SY;Moysak, GI;Akopyan, AA;Rzaev, JA;Danilenko, KV;Aftanas, LI; Concordance between the In Vivo Content of Neurospecific Proteins (BDNF, NSE, VILIP-1, S100B) in the Hippocampus and Blood in Patients with Epilepsy International journal of molecular sciences 2023-12-29 [PMID: 38203674]

Poon CH, Liu Y, Pak S et al. Prelimbic Cortical Stimulation with L-methionine Enhances Cognition through Hippocampal DNA Methylation and Neuroplasticity Mechanisms Aging and disease 2023-02-01 [PMID: 36818556] (WB, Rat)

Staszkiewicz R, G?adysz D, Gralewski M et al. Usefulness of Detecting Brain-Derived Neurotrophic Factor in Intervertebral Disc Degeneration of the Lumbosacral Spine Medical science monitor : international medical journal of experimental and clinical research 2023-01-16 [PMID: 36642939] (IHC-Fr, Human)

Details:
1:200 dilution

Gadsielinski M, Gladyszz D, Gralewski M Relationship between BDNF-positive number of nerve fibers and pain in intervertebral disc degeneration Sciforum 2023-01-01 (ICC/IF)

Gao F, Wang J, Yang S et al. Fear extinction induced by activation of PKA ameliorates anxiety-like behavior in PTSD mice Neuropharmacology 2023-01-01 [PMID: 36341808] (WB, Mouse)

Details:
Dilution used in WB 1:1000


More publications at http://www.novusbio.com/NB100-98682

**Novus Biologicals USA**
10730 E. Briarwood Avenue
Centennial, CO 80112
USA
Phone: 303.730.1950
Toll Free: 1.888.506.6887
Fax: 303.730.1966
nb-customerservice@bio-techne.com

**Bio-Techne Canada**
21 Canmotor Ave
Toronto, ON M8Z 4E6
Canada
Phone: 905.827.6400
Toll Free: 855.668.8722
Fax: 905.827.6402
canada.inquires@bio-techne.com

**Bio-Techne Ltd**
19 Barton Lane
Abingdon Science Park
Abingdon, OX14 3NB, United Kingdom
Phone: (44) (0) 1235 529449
Free Phone: 0800 37 34 15
Fax: (44) (0) 1235 533420
info.EMEA@bio-techne.com

**General Contact Information**
www.novusbio.com
Technical Support: nb-technical@bio-techne.com
Orders: nb-customerservice@bio-techne.com
General: novus@novusbio.com

## Products Related to NB100-98682

| | |
|---|---|
| NBL1-07961 | BDNF Overexpression Lysate |
| HAF008 | Goat anti-Rabbit IgG Secondary Antibody [HRP] |
| NB7160 | Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP] |
| NBP2-24891 | Rabbit IgG Isotype Control |

### Limitations

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

**For more information on our 100% guarantee, please visit www.novusbio.com/guarantee**

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