# **Product Datasheet**

# GFP Antibody - BSA Free NB600-308

Unit Size: 0.1 mg

Store at -20C. Avoid freeze-thaw cycles.

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## NB600-308

GFP Antibody - BSA Free

Product Information		
Unit Size	0.1 mg	
Concentration	Please see the vial label for concentration. If unlisted please contact technical services.	
Storage	Store at -20C. Avoid freeze-thaw cycles.	
Clonality	Polyclonal	
Preservative	0.01% Sodium Azide	
Isotype	IgG	
Purity	Immunogen affinity purified	
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2	
Product Description		
Description	This antibody was prepared from monospecific antiserum by immunoaffinity chromatography using Green Fluorescent Protein (Aequorea victoria) coupled to agarose beads followed by solid phase adsorption(s) to remove any unwanted reactivities. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-Rabbit Serum and purified and partially purified Green Fluorescent Protein (Aequorea victoria) GFP antibody is stable for several weeks at 4C as an undiluted liquid.	
Host	Rabbit	
Species	Non-species specific	
Reactivity Notes	No reaction was observed against Human, Mouse serum proteins. Suitable for detecting fusion proteins containing the GFP sequence expressed in Human, Mouse, Rat, C. elegans, Drosophila and in vitro transcription/translation systems and transgenic animals. Known cross reactivity with wt and all variants such as rGFP, eGFP, S65T-GFP, RS-GFP, YFP and EGFP. spreactivity reported in scientific literature (PMID:25724725). spreactivity reported in multiple pieces of scientific literature.  C. elegans reactivity reported in scientific literature (PMID: 27110099). spreactivity reported in Mouse reported in scientific literature (PMID: 32765228).  spreactivity reported in scientific literature (PMID: 32896843)	
Specificity/Sensitivity	No reaction was observed against Human, Mouse or Rat serum proteins.	
Immunogen	The immunogen is a Green Fluorescent Protein (GFP) fusion protein corresponding to the full length amino acid sequence (246aa) derived from the jellyfish Aequorea victoria.	
Product Application Details		
Applications	Western Blot, Dot Blot, ELISA, Electron Microscopy, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Immunoprecipitation, Immunohistochemistry Free-Floating, Immunohistochemistry Whole-Mount, Knockdown Validated	
Recommended Dilutions	Western Blot 1:500-1:5000, Flow Cytometry 1:10-1:1000, ELISA 1:20000- 1:120000, Immunohistochemistry 1:200-1:3000, Immunocytochemistry/ Immunofluorescence 1:500-1:5000, Immunoprecipitation 1:10-1:500, Immunohistochemistry-Paraffin 1:10-1:500, Immunohistochemistry-Frozen 1:50- 1:250, Dot Blot, Electron Microscopy 1:10-1:500, Immunohistochemistry Free- Floating, Immunohistochemistry Whole-Mount, Knockdown Validated	



#### Application Notes

This product is designed to detect GFP and its variants. GFP antibody has been tested by western blot and ELISA. This product can be used to detect GFP by ELISA (sandwich or capture) for the direct binding of antigen and recognizes wild type, recombinant and enhanced forms of GFP. Biotin conjugated polyclonal anti-GFP used in a sandwich ELISA is well suited to titrate GFP in solution using this antibody in combination with monoclonal anti-GFP using either form of the antibody as the capture or detection antibodies. However, use the monoclonal form only for the detection of wild type or recombinant GFP as this form does not sufficiently detect 'enhanced' GFP. The detection antibody is typically conjugated to biotin and subsequently reacted with streptavidin conjugated HRP. Fluorochrome conjugated polyclonal anti-GFP can be used to detect GFP by immunofluorescence microscopy in prokaryotic (E.coli) and eukaryotic (CHO cells) expression systems and can detect GFP containing inserts. Significant amplification of signal is achieved using fluorochrome conjugated polyclonal anti-GFP relative to the fluorescence of GFP alone. For immunoblotting use either alkaline phosphatase or peroxidase conjugated polyclonal anti-GFP to detect GFP or GFP containing proteins on western blots. Optimal titers for applications should be determined by the researcher.

Use in Immunoprecipitation reported in scientific literature (PMID:34887587).

Use in DB reported in scientific literature (PMID:34242364).

Use in Knockdown Validated reported in scientific literature (PMID: 32905777).

#### Images

Analysis of GFP in transgenic mouse pancreas in OCT. The blue region in the center is an islet which does not express GFP and is negative. Image from verified customer review.



Analysis of GFP tagged PKA subunits over-expressed in HEK293T cells using GFP antibody. Image from verified customer review.





Staining of GFP+ hepatocytes (brown) transplanted into the liver of a recipient animal using anti-GFP antibody. Cyclin D1 double staining in blue. Image from verified customer review.



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none.





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Analysis of GFP in mouse retinal cells. Image courtesy of anonymous customer review.



S2 cells

IP analysis of GFP in S2 Cells (Drosophila). Image from verified customer review.

Immunoprecipitation experiments showing that GFP-MISP binds endogenous IQGAP1 (upper panel) and MISP binds to IQGAP1 endogenously using specific antibodies (lower panel) in mitotically arrested (taxol and nocodazole, respectively) HeLa cell lysates. Image collected and cropped by CiteAb from the following publication (nature.com/articles/s41598-018-24682-8), licensed under a CC-BY license.



Immunocytochemistry/ Immunofluorescence: GFP Antibody [NB600-308] C - Myc is post-transcriptionally regulated by the IIS-GSK3 cascade.(A) Germaria from ovaries of ctrl, chicoRNAi, & bskRNAi driven by nos-Gal4 expressing LacZ under the control of myc endogenous promoter stained with anti- $\beta$ -galactosidase & anti-1B1. Scale bars, 10 µm. (B) A representative live imaging of germaria from flies expressing GFPtagged Sgg under its endogenous promoter. Scale bar, 10 µm. (C) A germarium from wt flies endogenously expressing Myc-GFP stained with anti-GFP (green) & anti-p-GSK3 (red). Germarium regions are indicated. Myc protein highly corresponds to inhibited form of GSK3. Scale bar, 10 µm. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/31612862), licensed under a CC0-1.0 license. Not internally tested by Novus Biologicals.









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Western Blot: GFP Antibody [NB600-308] - BRC-1 & BRD-1 are interdependent for localization.A) Co-localization between BRD-1::GFP (green) & TagRFP-T::BRC-1 (red) at late pachytene in live worms. Scale bar = 10 µm. B) Stills of germline nuclei from live worms expressing GFP::BRC-1 & mCherry::Histone H2B (mCherry::his-58; gfp::brc-1); merge & GFP channel; top two panels, respectively. GFP::BRC-1 expression in brd-1(ok1623) mutant at indicated meiotic stages. Bottom two panels show BRD-1::GFP localization in wild type & the brc-1(xoe4) mutant. Images are projections through half of the gonad. TZ = transition zone; EP = early pachytene; MP = mid pachytene; LP = late pachytene; DP = diplotene; DK = diakinesis. Scale bar =  $5 \mu m. C$ ) Immunoblot of whole worm extracts from indicated worms probed with anti-GFP &  $\alpha$ -tubulin antibodies. Lane 1 = N2: wild type; Lane 2 = JEL515: gfp::brc-1; Lane 3 = JEL520: gfp::brc-1 brd-1(ok1623); Lane 4 = JEL744: brc-1 (xoe4) brd-1::gfp; Lane 5 = JEL657: brd-1::gfp; Lane 6 = JEL678: brc-1 (tm1145) brd-1::gfp. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/30383767), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

Immunocytochemistry/ Immunofluorescence: GFP Antibody [NB600-308] A - Other IIS components are not altered by bsk RNAi.(A) Confocal images for germaria expressing Chico-GFP, myc-Dp110 or PDK1-GFP in the background of ctrl or bskRNAi from ovaries stained with anti-GFP or antimyc. Scale bars, 10 µm. (B) Ovaries expressing LacZ driven by the puc promoter stained with anti- $\beta$ -galactosidase, anti-1B1, & DAPI. Note that JNK activity is moderately induced in late germarium & decreased in the following stages, while JNK activity is much stronger in follicle cells of a maturing egg. Scale bars, 20 µm. (C) Germaria from ovaries of ctrl & bskRNAi driven by nos-Gal4 stained with anti-AKT & anti-1B1. Scale bars, 10 µm. (D) Quantification of AKT intensity from cysts in germarium region 2A & 2B of ovaries with ctrl & bskRNAi driven by nos-Gal4. Intensities are normalized to the value of ctrl at region 2B. n = 7 & 8 germaria for ctrl & bskRNAi, respectively. Error bars represent SEM. \*p<0.005. (E) Visualization of the InR mRNA by FISH in germaria from ovaries of ctrl & bskRNAi driven by nos-Gal4. Note that InR mRNA level is decreased by bsk RNAi. Germaria are outlined with dotted lines. Scale bars, 10 µm. (F) Quantification of InR mRNA density in region 2A & 2B germ cells from ovaries with indicated genotypes. n = 9 germaria for each genotype. Error bars represent SEM. \*p<0.005. (G) Quantification of relative Myc-GFP intensity in region 2B cysts of ovaries illustrated in Figure 5H. n = 10 germaria for each genotype. Error bars represent SEM. \*p<0.005.10.7554/eLife.49309.017Figure 5—figure supplement 1 —source data 1.Relative AKT intensity, InR mRNA density, & Myc-GFP intensity in the germarium. Relative AKT intensity, InR mRNA density, & Myc-GFP intensity in the germarium. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/31612862), licensed under a CC0-1.0

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#### **Publications**

Jiang T, Niu G, Wu C, Tu X et Al. Cell-autonomous action of Slit2 in radial migration of cortical projection neurons Front Mol Neurosci 2024-12-17 [PMID: 39687694]

Fleming W, Lee J, Briones BA, Bolkan SS et Al. Cholinergic interneurons mediate cocaine extinction in male mice through plasticity across medium spiny neuron subtypes Cell Rep 2022-06-01 [PMID: 35649378]

Jiang T, Yang Y, Wu C, Qu C et Al. MicroRNA-218 regulates neuronal radial migration and morphogenesis by targeting Satb2 in developing neocortex Biochem Biophys Res Commun 2023-01-28 [PMID: 36708662]

Bodart-Santos V, Ruan Z, Melvin BC, Pandey I et Al. Selenoprotein P is a target for regulating extracellular vesicle biogenesis and secretion from activated microglia in vivo Cell Rep 2024-12-01 [PMID: 39616613]

Angelakos CC, Girven KS, Liu Y, Gonzalez OC et Al. A cluster of neuropeptide S neurons regulates breathing and arousal Curr Biol 2023-12-06 [PMID: 38056461]

Nakano Y, Wiechert S, Fritzsch B, Bánfi B. et Al. Inhibition of a transcriptional repressor rescues hearing in a splicing factor-deficient mouse Life Sci Alliance 2020-10-22 [PMID: 33087486]

Caldwell B, Meyer AR, Weis JA et Al. Chief cell plasticity is the origin of metaplasia following acute injury in the stomach mucosa Gut 2021-11-24 [PMID: 34497145]

Y Gu, Y Chen, L Wei, S Wu, K Shen, C Liu, Y Dong, Y Zhao, Y Zhang, C Zhang, W Zheng, J He, Y Wang, Y Li, X Zhao, H Wang, J Tan, L Wang, Q Zhou, G Xie, H Liang, J Ou ABHD5 inhibits YAP-induced c-Met overexpression and colon cancer cell stemness via suppressing YAP methylation Nature Communications, 2021-11-18;12(1):6711. 2021-11-18 [PMID: 34795238] (Chromatin Immunoprecipitation, Immunohistochemistry, Western Blot)

Schröder CM, Zissel L, Mersiowsky SL et AI. EOMES establishes mesoderm and endoderm differentiation potential through SWI/SNF-mediated global enhancer remodeling Dev Cell 2024-12-05 [PMID: 39662466]

Ahmed O, Ekumi KM, Nardi FV et Al. Stable, neuron-specific gene expression in the mouse brain J Biol Eng 2024-01-16 [PMID: 38229168]

Jekaterina Vohhodina, Liana J. Goehring, Ben Liu, Qing Kong, Vladimir V. Botchkarev Jr., Mai Huynh, Zhiqi Liu, Fieda O. Abderazzaq, Allison P. Clark, Scott B. Ficarro, Jarrod A. Marto, Elodie Hatchi, David M. Livingston BRCA1 binds TERRA RNA and suppresses R-Loop-based telomeric DNA damage Nature Communications 2021-06-10 [PMID: 34112789] (Western Blot)

Lizardo MM, Hughes C, Huang YZ et Al. Pharmacologic Inhibition of EIF4A Blocks NRF2 Synthesis to Prevent Osteosarcoma Metastasis Clin Cancer Res 2024-10-01 [PMID: 39078310]

More publications at <a href="http://www.novusbio.com/NB600-308">http://www.novusbio.com/NB600-308</a>





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# Products Related to NB600-308

NB100-56401PEP	GFP Antibody Blocking Peptide
NBP2-24891	Rabbit IgG Isotype Control
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]

#### 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.

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