Product Datasheet

Bromodeoxyuridine/BrdU Antibody - Azide and BSA Free
NB500-235

Unit Size: 0.25 mg

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

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Updated 9/9/2025 v.20.1

NB500-235

Bromodeoxyuridine/BrdU Antibody - Azide and BSA Free

Product Information

Unit Size	0.25 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	No Preservative
Isotype	IgG
Purity	Protein G purified
Buffer	PBS (pH 7.4)

Product Description

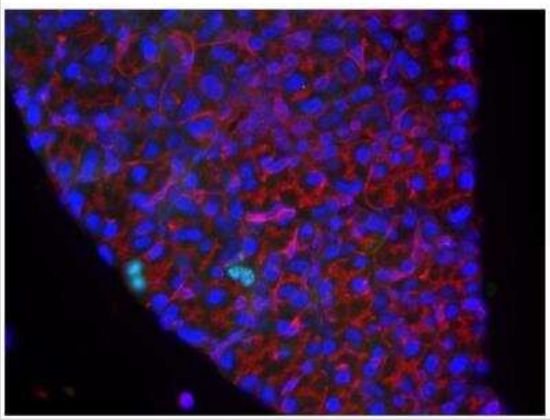
Description	Novus Biologicals Sheep Bromodeoxyuridine/BrdU Antibody - Azide and BSA Free (NB500-235) is a polyclonal antibody validated for use in IHC, ICC/IF and IP. Anti-Bromodeoxyuridine/BrdU Antibody: Cited in 24 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Sheep
Species	Human, Mouse, Rat, All Species, Guinea Pig
Reactivity Notes	Use in Mouse reported in scientific literature (PMID:33731750).
Marker	Proliferation Marker
Specificity/Sensitivity	BrdU
Immunogen	Bromodeoxyuridine (BrdU) coupled to keyhole limpet hemocyanin (KLH).

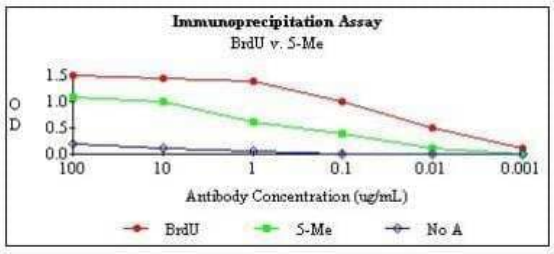
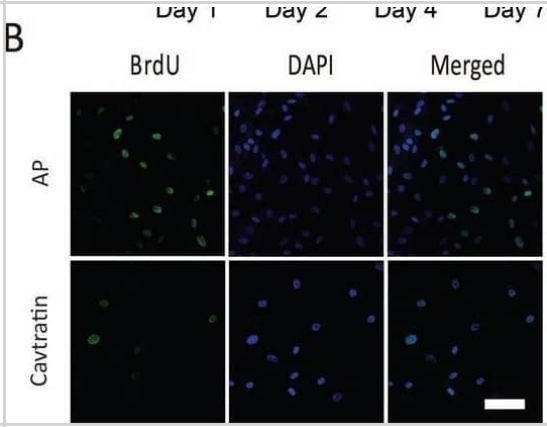
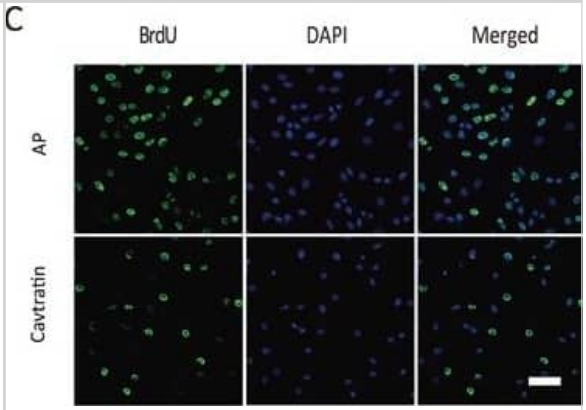
Product Application Details

Applications	Immunohistochemistry-Paraffin, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, In vitro assay, Immunoprecipitation, Immunohistochemistry Free-Floating
Recommended Dilutions	Immunohistochemistry 1:10-1:500, Immunocytochemistry/ Immunofluorescence 1:100-1:200, Immunoprecipitation 25-100 ug/ml, Immunohistochemistry-Paraffin 10 ug/ml, Immunohistochemistry-Frozen 10 ug/ml, In vitro assay, Immunohistochemistry Free-Floating
Application Notes	Use in IHC-Fr reported in scientific literature (PMID:33731750). Use in IHC-FrFl reported in scientific literature (PMID:33744708) In vitro reported in (PMID: 29100301).

Images

Immunocytochemistry/Immunofluorescence: Bromodeoxyuridine/BrdU Antibody [NB500-235] - IF analysis of BrdU in Proteinase K pretreated mouse lacrimal gland. Image courtesy of anonymous customer review.



Immunoprecipitation: Bromodeoxyuridine/BrdU Antibody [NB500-235] - Lysate was immunoprecipitated with anti-brdu antibody (NB500-235), 5-methyl cytosine (5-Me), or a no antibody control (No A). An ELISA was then performed to measure total activity.	
Cavtratin inhibits the proliferation of vascular smooth muscle cells(A) MTT assay using human umbilical vein smooth muscle cells (HUVSMCs) cultured with 10% FBS. The cells were treated with cavtratin or AP at different concentrations for different times as indicated. A570 represented the cell proliferation. (B and C) Anti-BrdU staining of HUVSMCs 4 days after BrdU and cavtratin or AP application. *, P<0.05 versus the AP group under the same conditions. Scale bar, 50 μm. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/29100301), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	
Cavtratin inhibits the survival and proliferation of endothelial cells(A) Cavtratin decreased HUVEC survival in an MTT assay with 0.5% of FBS in the culture medium. Cells were treated with different concentrations (2 μM, 10 μM and 50 μM) of cavtratin or with 50 μM AP as a control. Absorbance at 570 nm (A570) indicated the cell survival. (B) HUVEC proliferation was arrested under treatment with cavtratin in an MTT assay with 10% of FBS in the culture medium. Cells were treated with 2 μM, 10 μM or 50 μM cavtratin, or with 50 μM AP as a control. A570 represented the cell proliferation. (C, D) Treatment with cavtratin significantly decreased BrdU incorporation into HUVECs. Cells were treated with 50 μM cavtratin or AP for 4 days. BrdU was also added to the medium to label the proliferating cells, which were later visualized by anti-BrdU staining. Images were captured under the same confocal setting. All BrdU+ cells were counted, including those with weak fluorescence. All data represents the mean +/- SEM. *, P < 0.05 versus the AP group under the same conditions. Scale bar, 50 μm. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/29100301), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

Publications

Li S, Zeng G, Pang C et al. Single-cell and spatial transcriptomics analysis reveals that Pros1 + oligodendrocytes are involved in endogenous neuroprotection after brainstem stroke. Neurobiology of disease 2025-03-14 [PMID: 40090471]

Nicole Lawrence, Adelaide S M Dennis, Adele M Lehane, Anna Ehmann, Peta J Harvey, Aurélie H Benfield, Olivier Cheneval, Sónia Troeira Henriques, David J Craik, Brendan J McMorran Defense Peptides Engineered from Human Platelet Factor 4 Kill Plasmodium by Selective Membrane Disruption. Cell chemical biology 2019-06-12 [PMID: 30033131]

Ralph J S van Mechelen, Phani Sudarsanam, Christian J F Bertens, Mehmet O Tas, Marion J J Gijbels, Leonard Pinchuk, Jan de Boer, Henny J M Beckers The Influence of Design Modifications and Microstructured Surface Topographies on Bleb Survival after Glaucoma Tube Shunt Implantation. Advanced biology 2023-04-27 [PMID: 37102630]

Li J, Wang X, Shi L et al. A Mammalian Conserved Circular RNA CircLARP1B Regulates Hepatocellular Carcinoma Metastasis and Lipid Metabolism Advanced science (Weinheim, Baden-Wurttemberg, Germany) 2023-11-12 [PMID: 37953462]

van Mechelen RJS, Wolters JEJ, Herfs M et al. Wound Healing Response After Bleb-Forming Glaucoma Surgery With a SIBS Microshunt in Rabbits Translational vision science & technology 2022-08-01 [PMID: 36018582] (IHC-P, Rabbit)

Zachar G, Kemecsei R, Papp SM et al. D-Aspartate consumption selectively promotes intermediate-term spatial memory and the expression of hippocampal NMDA receptor subunits Scientific reports 2021-03-17 [PMID: 33731750] (IHC-Fr, Mouse)

Luo O, Kwiecien-Delaney B, Martin P et al. The effect of early life immune challenge on adult forced swim test performance and hippocampal neurogenesis Journal of Neuroimmunology 2021-02-01 [PMID: 33744708] (IHC-FrFl, Mouse)

Chen ZC, Wang TT, Bian W et al. Allopregnanolone restores the tyrosine hydroxylase-positive neurons and motor performance in a 6-OHDA-injected mouse model CNS Neurosci Ther 2020-06-30 [PMID: 32602622] (IF/IHC, Mouse)

Redecker TM, Kisko TM, WOhr M, Schwarting RKW Cacna1c haploinsufficiency lacks effects on adult hippocampal neurogenesis and volumetric properties of prefrontal cortex and hippocampus in female rats Physiol. Behav. 2020-05-27 [PMID: 32473156] (IF/IHC, Rat)

Karakashev S, Fukumoto T, Zhao B et al. EZH2 Inhibition Sensitizes CARM1-High, Homologous Recombination Proficient Ovarian Cancers to PARP Inhibition Cancer Cell 2020-01-22 [PMID: 32004442] (ICC/IF, Human)

Xu H, Zhang L, Chen W et al. Inhibitory effect of caveolin-1 in vascular endothelial cells, pericytes and smooth muscle cells Oncotarget. 2017-09-29 [PMID: 29100301] (In vitro, Human)

Gilbert ME, Goodman JH, Gomez J et al. Adult hippocampal neurogenesis is impaired by transient and moderate developmental thyroid hormone disruption Neurotoxicology 2016-12-31 [PMID: 28048979] (Rat)

More publications at http://www.novusbio.com/NB500-235

Procedures

Immunohistochemistry Protocol for BrdU Antibody (NB500-235)

Immunohistochemistry protocol for Bromodeoxyuridine (BrdU) Polyclonal Antibody

Original antigenic studies performed by Dr David Stollar, Tufts University, Boston, MA

ABSTRACT

New methods for double and triple colour labeling using monoclonal antibodies to the proliferation-associated markers 5-methly-cytosine, BrdU and Ki67 are described. In order to make incorporated 5-methyl-cytosine or BrdU accessible to most antibodies, mild denaturation of the DNA is needed, and this is usually obtained by exposing the cells to acid or base. This procedure destroys most cellular antigen, including nuclear TdT and Ki67. In this study, we show that fixation in cold methanol instead of 70% ethanol for 30 minutes followed by immersion in 7 x 10-3 N NaOH for 10-15 seconds allows BrdU staining with the simultaneous detection of nuclear cytoplasmic and membrane assigns as well as preservation of morphological detail. This method is optimal for detection of nuclear Ki67 and TdT. These reagents, together with antibodies to membrane assigns can be included in triple colour labeling using second layers conjugated to FITC, TRITC and colloidal gold. With these methods it is now possible to characterize the phenotype of dividing cell populations such as precursors in central lymphoid tissues and germinal centre blasts in peripheral lymphoid organs.

Reference for tissue staining with anti-BrdU
Campana D, Coustan-Smith E., Janossy G., Department of Immunology, Royal Free Hospital School of Medicine, London, UK. J Immunol Methods 107(1):79-88 1988 Feb 24 Double and triple staining methods for studying the proliferative activity of human B and T lymphoid cells Abstract

For best results on unconjugated antibody, use the product at a concentration of 25 to 100 ug/mL. Nearly complete immunoprecipitation was obtained at concentrations of 100 to 500ug/mL. The product has also been tested for utility for staining of bromodeoxyuridine incorporated into DNA of replicating cells. When utilized at a purified concentration of 10 ug/mL, the product is comparable to commercially available monoclonal antibodies commonly used for the same purpose.

A key issue is that it is necessary to denature the DNA so as to expose the base to the antibodies. One protocol is: Sachiko Matsuuraa and Kazuo Suzukia Immunohistochemical Analysis of DNA Synthesis During Chronic Stimulation with Isoproterenol in Mouse Submandibular Gland . Journal of Histochemistry and Cytochemistry, Vol. 45, 1137-1146, Immunohistochemistry DNA-synthesizing cells were detected by peroxidase-anti-peroxidase (PAP) immunostaining with anti-BrdU antibodies by the method of Harms et al. 1986 , which was slightly modified as follows: Sections were treated with 2 N HCl at 60C for 15 min and washed in running water for 15 min. After dehydration in an ethanol series, the sections were etched with xylene (15 min, twice). Nuclear proteins, which mask incorporated BrdU, were digested with 0.025% protease (Type V; Sigma) in PBS at 37C for 10 min, and the sections were then washed with cold PBS three times for 5 min.

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Products Related to NB500-235

HAF016	Donkey anti-Sheep IgG Secondary Antibody [HRP]
NL010	Donkey anti-Sheep IgG Secondary Antibody [NL557]
NBP1-97055-10mg	Sheep IgG Isotype Control
NBP3-07125	Bromodeoxyuridine/BrdU MCF-7 Cell Line Slides (Adult Adenocarcinoma)- Paraffin

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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