

Product Datasheet

Bromodeoxyuridine/BrdU Antibody (BU1/75 (ICR1)) NB500-169

Unit Size: 0.1 mg

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

www.novusbio.com



technical@novusbio.com

Reviews: 9 Publications: 144

Protocols, Publications, Related Products, Reviews, Research Tools and Images at:
www.novusbio.com/NB500-169

Updated 12/20/2023 v.20.1

**Earn rewards for product
reviews and publications.**

Submit a publication at www.novusbio.com/publications

Submit a review at www.novusbio.com/reviews/destination/NB500-169



NB500-169

Bromodeoxyuridine/BrdU Antibody (BU1/75 (ICR1))

Product Information	
Unit Size	0.1 mg
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	BU1/75 (ICR1)
Preservative	0.09% Sodium Azide
Isotype	IgG2a
Purity	Protein G purified
Buffer	PBS
Product Description	
Host	Rat
Species	Human, Mouse, Rat, Non-species specific, Drosophila, Monkey
Reactivity Notes	Monkey reactivity reported in (PMID: 28566378). Rat reactivity reported in (PMID:23966683). Drosophila reactivity reported in (PMID:22438819).
Marker	Proliferation Marker
Specificity/Sensitivity	This reacts with BrdU in single stranded DNA, BrdU attached to a protein carrier or free BrdU. It detects nucleated cells in S-Phase which have had BrdU incorporated into their DNA. Also reacts weakly with chlorodeoxyuridine, but does not cross-react with thymidine or iododeoxyuridine.
Immunogen	Made to Chemical BrdU
Product Application Details	
Applications	Western Blot, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Cell Proliferation
Recommended Dilutions	Western Blot, Flow Cytometry 1:25-1:200, Immunohistochemistry 1:10-1:500, Immunocytochemistry/ Immunofluorescence 1:10-1:500, Immunohistochemistry-Paraffin 1:25-1:200, Immunohistochemistry-Frozen 1:10-1:500, Cell Proliferation
Application Notes	Clone BU1/75 (ICR1) can be used for labeling paraffin-embedded tissue sections fixed in formalin. Denaturation of the DNA is critical for successful staining of BrdU. This can be achieved by exposing cells to heat, or acid. For heat-induced epitope retrieval, 10mM citrate buffer pH6.0 is recommended. Alternatively, a 30 min incubation in 2M HCl can be performed. The HCl must then be neutralized for 2 min with 0.1 M Na ₂ B ₄ O ₇ . Pretreatment of tissues with proteinase K should be avoided. IHC-F was reported in scientific literature. Use in WB reported in scientific literature (PMID 27425845). Use in Cell Proliferation reported in scientific literature (PMID:34440835).



Publications

Bu F, Min J, Razzaque M et al. Activation of cerebral Ras-related C3 botulinum toxin substrate (Rac) 1 promotes post-ischemic stroke functional recovery in aged mice Neural Regeneration Research 2024-04-01 [PMID: 37843224] (IHC, Mouse)

Details:
1:500 dilution

Sachsenweger J, Jansche R, Merk T et al. ABRAXAS1 orchestrates BRCA1 activities to counter genome destabilizing repair pathways-lessons from breast cancer patients Cell death & disease 2023-05-17 [PMID: 37198153] (ICC/IF)

van Schie J, de Lint K, Pai G et al. MMS22L-TONSL functions in sister chromatid cohesion in a pathway parallel to DSCC1-RFC Life Science Alliance 2023-02-01 [PMID: 36622344] (ICC/IF, Human)

Wang YC, Kelso AA, Karamafrooz A et al. Arginine shortage induces replication stress and confers genotoxic resistance by inhibiting histone H4 translation and promoting PCNA polyubiquitination bioRxiv 2023-02-03 [PMID: 36778247] (Human)

Hashimoto M, Takeichi K, Murata K et al. Regulation of neural stem cell proliferation and survival by protein arginine methyltransferase 1 Frontiers in neuroscience 2022-11-10 [PMID: 36440275] (IHC-Fr, ICC/IF, Mouse)

Details:
IHC-Fr Dilution used was 1:500, ICC/IF dilution used was 1:200

Zhu C, Iwase M, Li Z et al. Profilin-1 regulates DNA replication forks in a context-dependent fashion by interacting with SNF2H and BOD1L Nature communications 2022-11-01 [PMID: 36319634] (ICC/IF, Human)

Chen X, Ling X, Xia J et al. Mature dendritic cell-derived dendrosomes swallow oxaliplatin-loaded nanoparticles to boost immunogenic chemotherapy and tumor antigen-specific immunotherapy Bioact Mater 2022-04-07 [PMID: 35386340]

Halliwell JA, Frith TJR, Price CJ et al. Nucleosides rescue replication-mediated genome instability of human pluripotent stem cells Stem Cell Reports 2020-05-16 [PMID: 32413278]

Rodriguez-Iglesias, N;Nadjar, A;Sierra, A;Valero, J; Susceptibility of Female Mice to the Dietary Omega-3/Omega-6 Fatty-Acid Ratio: Effects on Adult Hippocampal Neurogenesis and Glia International journal of molecular sciences [PMID: 35328825] (ICC/IF, ICC/IF, Mouse)

Araki R, Nishida S, Oishi Y et al. Methyl Donor Supplementation Prevents a Folate Deficiency-induced Depression-like State and Neuronal Immaturity of the Dentate Gyrus in Mice Neuroscience 2022-01-19 [PMID: 35065186] (IF/IHC, Mouse)

Zhou B Novel skeletal stem and progenitor cells and their regulation Thesis 2022-01-01

Tsujikawa K, Saito K, Nagasaka A, Miyata T Developmentally interdependent stretcher-compressor relationship between the embryonic brain and the surrounding scalp in the preosteogenic head Developmental dynamics : an official publication of the American Association of Anatomists 2022-01-08 [PMID: 34997665] (ICC/IF, Rat)

More publications at <http://www.novusbio.com/NB500-169>



Procedures

Flow Cytometry Protocol for BrdU Antibody (NB500-169)

Flow Cytometry Analysis:

Prepare the following solutions before proceeding:

Phosphate buffered saline (PBS)

2N HCl, 0.5% Triton X-100

PBS containing 0.05% Tween-20

PBS containing 1% BSA (PBS/BSA)

10mg/ml Propidium iodide (PI)

As a positive control, BrdU labeled cells may be obtained from Phoenix Flow Systems (<http://www.phnxfow.com>), catalogue number ACNC12.

1. Add BrdU to the cell suspension in culture medium to a final concentration of 10 $\mu\text{mol/L}$ and incubate for 30 minutes in a CO₂ incubator at 37°C.
2. Wash cells twice with PBS/BSA, and resuspend in PBS
3. Add cells slowly into 5ml of 70% ethanol at -20°C, mixing continuously (vortex preferred). Incubate on ice for 30 minutes.
4. Centrifuge at 500g for 10 minutes, decant supernatant, and resuspend cell pellet.
5. Add 2ml 2N HCl, 0.5% Triton X-100 and incubate the cells for 30 minutes at room temperature (preferably on a rocking platform).
6. Centrifuge at 500g for 10 minutes, decant supernatant and resuspend in 3 ml 0.1M Na₂B₄O₇, pH 8.5
7. Centrifuge at 500g for 10 minutes, decant supernatant and resuspend the cells in PBS/BSA + 0.05% Tween 20. Adjust cell concentration to $1 \times 10^7/\text{ml}$
8. Aliquot 100 μl of cell suspension into required number of 12 x 75mm tubes.
9. Incubate the cells with the anti-BrdU antibody at the recommended dilution for 30 minutes at room temperature.
10. Add 2 mls PBS/BSA and centrifuge the cells at 1000rpm for 5 minutes.
11. If a secondary antibody layer is required then decant the wash and incubate the cells with the secondary antibody for 30 minutes at room temperature. If no secondary antibody layer is required then proceed to step 13.
12. Wash the cells after the secondary antibody layer by repeating step 10.
13. Decant off the wash and add 1ml PBS containing 10 $\mu\text{g/ml}$ PI (Dilute the 10mg/ml solution of PI 1/1000 in a suitable volume of PBS)
14. Analyse cells by flow cytometry following the manufacturer's instructions. The PI should be read on the appropriate channel set to the Peak/Area and not log scale.

IMMUNOHISTOLOGY

Formalin-fixed paraffin-embedded tissue sections:

Clone BU1/75 (ICR1) can be used for labelling paraffin-embedded tissue sections fixed in formalin. Pretreatment of tissues with heat-induced epitope retrieval using 10mM citrate buffer pH6.0 is recommended. Pretreatment of tissues with proteinase K should be avoided.



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

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

Earn gift cards/discounts by submitting a review: www.novusbio.com/reviews/submit/NB500-169

Earn gift cards/discounts by submitting a publication using this product:
www.novusbio.com/publications

