Datasheet for 200-301-H50

BrdU Antibody

Overview

Description:	Anti-BrdU (MOUSE) Monoclonal Antibody - 200-301-H50
Item No.:	200-301-H50
Size:	100 µg
Applications:	Dot Blot, IF, FISH, IHC
Reactivity:	BrdU, CldU, IdU
Host Species:	Mouse

Product Details

Background:	Bromodeoxyuridine (5-bromo-2'-deoxyuridine, BrdU) is a synthetic thymidine nucleoside analog. BrdU is commonly used to allow the detection of growing or proliferating cells in living tissues. During the S-phase of cell division, DNA replication occurs, and BrdU can be incorporated into the newly synthesized DNA by substituting for naturally occurring thymidine. Antibodies specific for BrdU are subsequently used to detect the incorporated BrdU thymidine analog. This highlights cells that were actively replicating their DNA and is suggestive of actively growing cells. Antibody binding usually requires the DNA to be denatured, typically by exposing the cells to acid or heat.
Synonyms:	mouse anti-BrdU Antibody, Bromodeoxyuridine, 5-bromo-2'-deoxyuridine, BrdU
Host Species:	Mouse
Clonality:	Monoclonal
Clone ID:	29G6.E8
Format:	IgG

Target Details

Reactivity:	BrdU, CldU, IdU
Immunogen Type:	Other
Immunogen:	Anti-BrdU monoclonal antibody was produced in mice by repeated immunizations prepared via immunizations with BromodeoxyUridine-KLH followed by hybridoma development.

Purity/Specificity:	Anti-BrdU Monoclonal Antibody was purified from ascites fluid by Protein A chromatography. This antibody reacts strongly with BrdU. Cross-reactivity is observed with CldU and IdU.

Application Details

Tested Applications:	Dot Blot, IF
Suggested Applications:	FISH, IHC (Based on references)
Application Note:	Anti-BrdU Antibody has been tested immunofluorescence and slot blot assays. Antibody may be suitable for additional immunoassays including flow cytometry and immunohistochemistry. Specific conditions for reactivity should be optimized by the end user. Antibody will detect incorporated BrdU thymidine analog from replicated cells.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:2000 - 1:10000
FC:	1:50-1:100
IF:	1:500-1:3000
IHC:	1:100-1:500
WB:	1:2000 - 1:5000

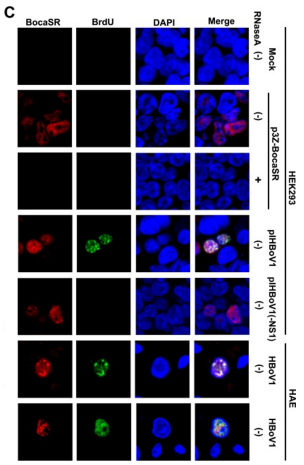
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/ml by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

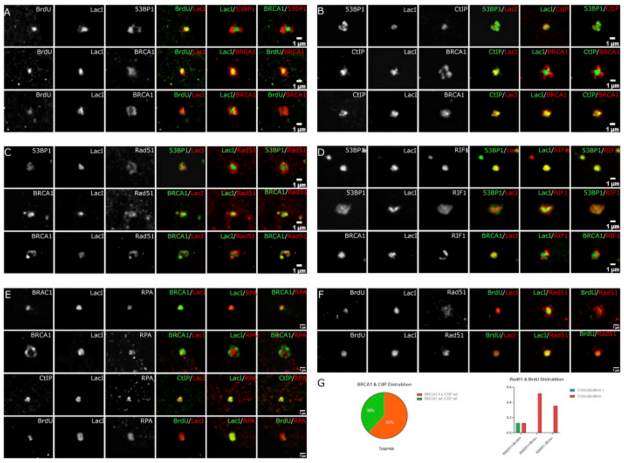
Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store BrdU Antibody at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

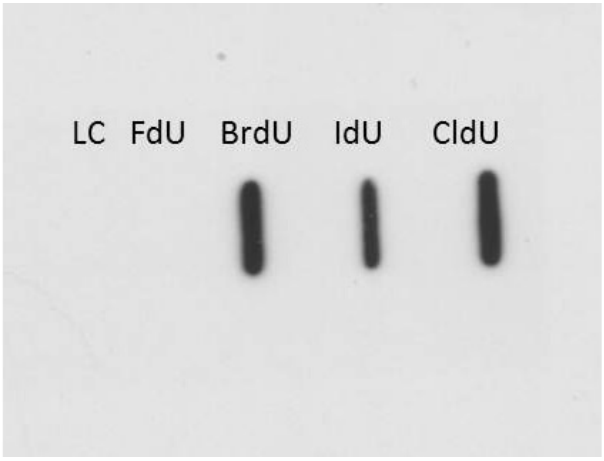
Images



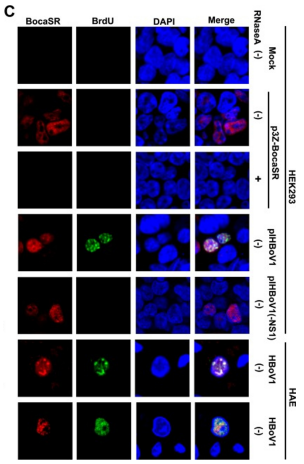
Fluorescence in situ Hybridization (FISH)
(C) FISH-IF analysis of BocaSR expression. HEK293 cells were transfected with p3Z-BocaSR, pIHBoV1(-NS1), or pIHBoV1. HAE-ALI cultures were infected with HBoV1. Cells were BrdU labeled at 48 h posttransfection or 10 days postinfection and subjected to FISH-IF analysis. DAPI was used to identify nuclei. RNase A-treated transfected HEK293 cells were used as a control. pIHBoV1(-NS1) (21) was transfected as a nonreplication control. Magnification, ×100.
Fig 9.
PMID: 28122984



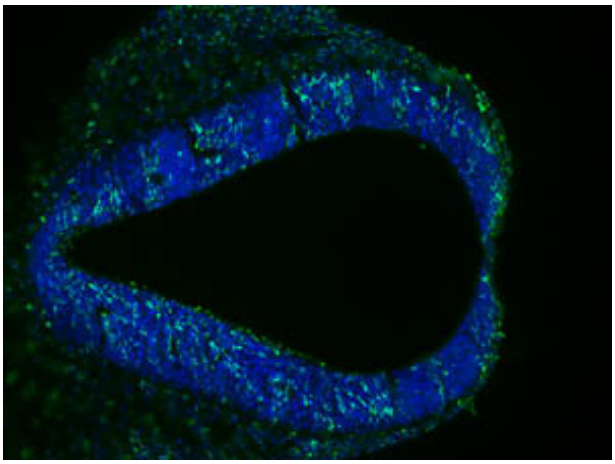
Immunofluorescence Microscopy
Spatial localization of BrdU labeling, CtIP, RAD51, Rif1, and RPA relative to LacI and the DSB compartment. U2OS 265 Fok1 induced DSB and fixed 1 h post-treatment and stained with antibodies recognizing 53BP1, BRCA1, BrdU, CtIP, Rad51, Rif1, and RPA. For the BrdU experiment, cells were labeled with BrdU for 18 h prior to treatment with Shield1 and 4-OHT. (A) BrdU distribution is compared to LacI. (B) CtIP localization is compared to LacI. Recruitment of Rad51 versus 53BP1 and BRCA1 relative to LacI (C) and Rif1 recruitment relative to 53BP1, BRCA1, and LacI (D). (E) Localization of RPA compared with BRCA1, CtIP, and BrdU. (F) Different occupancy of Rad51 relative to end resection. (G) BRCA1 and CtIP distribution at DSB sites. BRCA1 exterior and CtIP interior versus BRCA1 interior and CtIP interior localizing to LacI. Rad51 and BrdU colocalization at the site of DNA break. The scale bar represents 1 µm.
FIGURE 5.
PMID: 35923694



Western Blot
Western blot of Anti-BrdU antibody. Lane 1: loading control. Lane 2: FdU. Lane 3: BrdU. Lane 4: IdU. Lane 5 CldU. Load: 20 µg per lane. Primary antibody: Anti-BrdU antibody at 1:1000 for overnight at 4°C. Secondary antibody: IRDye800™ mouse secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted: BrdU. Other band(s): cross reactive bands observed for other nucleoside analogs, IdU and CldU.

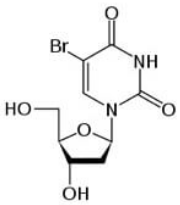


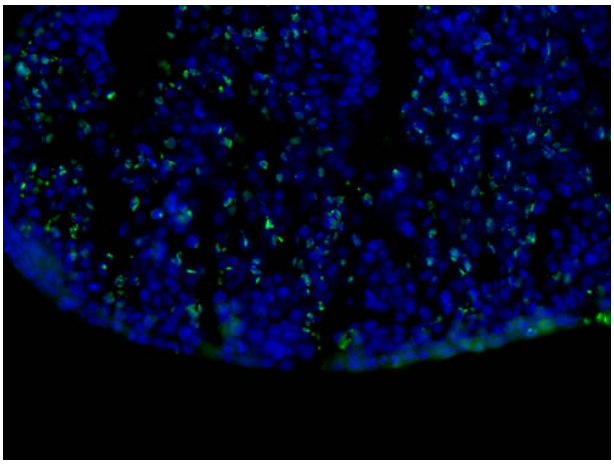
Immunofluorescence Microscopy
Immunofluorescence Microscopy of Mouse Anti-BrdU antibody. Tissue: OCT-embedded E10.5 mouse embryo. Localization: 20X, section through the developing limb bud. Fixation: 4% PFA. Antigen retrieval: not required. Primary antibody: BrdU antibody at 1:1000 in 0.4% PBS+Triton with 1% normal sheep serum overnight at 4°C. Secondary antibody: Alexa Fluor 488 Anti-Mouse secondary antibody at 1:200 for 45 min at RT. Staining: Double labeled (green/blue) cells represent cells that were actively dividing.



Immunofluorescence Microscopy
Immunofluorescence Microscopy of Mouse Anti-BrdU antibody. Tissue: OCT-embedded E10.5 mouse embryo. Localization: 20X, section through the developing hindbrain. Fixation: 4% PFA. Antigen retrieval: not required. Primary antibody: BrdU antibody at 1:1000 for overnight at 4°C in 0.4% PBS+Triton with 1% normal sheep serum. Secondary antibody: Alexa Fluor 488 Anti-Mouse secondary antibody at 1:200 for 45 min at RT. Staining: Double labeled (green/blue) cells represent cells that were actively dividing.

Diagram
Bromodeoxyuridine (BrdU) chemical structure representation.





Immunofluorescence Microscopy
Immunofluorescence Microscopy of Mouse Anti-BrdU antibody. Tissue: OCT-embedded E10.5 mouse embryo. Localization: 40X, section through the developing limb bud. Fixation: 4% PFA. Antigen retrieval: not required. Primary antibody: BrdU antibody at 1:500 in 0.4% PBS+Triton with 1% normal sheep serum overnight at 4°C. Secondary antibody: Alexa Fluor 488 Anti-Mouse secondary antibody at 1:200 for 45 min at RT. Staining: Double labeled (green/blue) cells represent cells that were actively dividing.

References

- Watkins RD et al. The Protein Tyrosine Phosphatase 1B Modulates the Activation of Yes-Associated Protein and Sensitizes to Cytotoxic Chemotherapy in Preclinical Models of Cholangiocarcinoma. *Cells.* (2025)
- Abate, NG et al. Heterogeneity of Organization of Subcompartments in DSB Repair Foci. *Frontiers in Genetics* (2022)
- Silva et al. Cell-Intrinsic Control of Interneuron Migration Drives Cortical Morphogenesis. *Cell* (2018)
- Wang et al. Parvovirus Expresses a Small Noncoding RNA That Plays an Essential Role in Virus Replication. *Journal of Virology* (2017)

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