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Datasheet for 600-401-C29

BrdU Antibody

Overview

Description:	Anti-BrdU (RABBIT) Antibody - 600-401-C29
Item No.:	600-401-C29
Size:	100 µg
Applications:	Dot Blot, ELISA, IHC, FC, IF, IP, Multiplex, Other
Reactivity:	BrdU
Host Species:	Rabbit

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:	rabbit anti-BrdU Antibody, bromodeoxyuridine, 5-bromo-2'-deoxyuridine
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Reactivity:	BrdU
Immunogen Type:	Other
Immunogen:	Anti-BrdU affinity purified antibody was purified from monospecific rabbit antiserum prepared via repeated immunizations with BromodeoxyUridine-KLH.
Purity/Specificity:	Anti-BrdU Antibody was affinity purified from monospecific antiserum by immunoaffinity chromatography.

Application Details

Tested Applications:	Dot Blot, ELISA, IHC
Suggested Applications:	FC, IF, IP, Multiplex, Other (Based on references)
Application Note:	Anti-BrdU Antibody has been tested by ELISA, slot blot, IHC, and is suitable for immunofluorescence microscopy and flow cytometry. Specific conditions for reactivity should be optimized by the end user. Expect to 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 - 1:10,000
FC:	1:50-1:100
IF:	1:500
IHC:	1:100-1:500
IP:	User Optimized
WB:	User Optimized

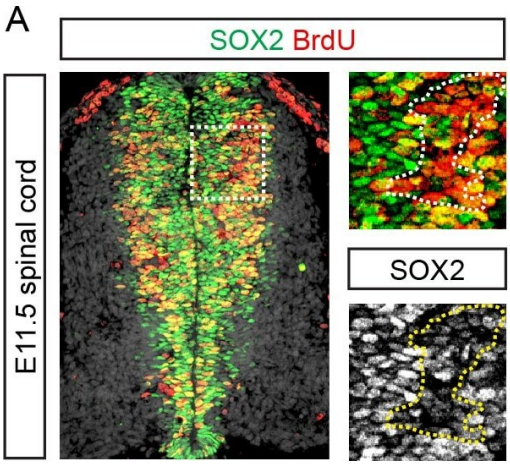
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.23 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

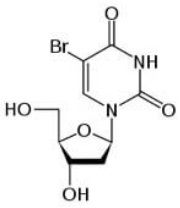
Shipping Condition:	Dry Ice
Storage Condition:	Store BrdU Antibody at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable 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.

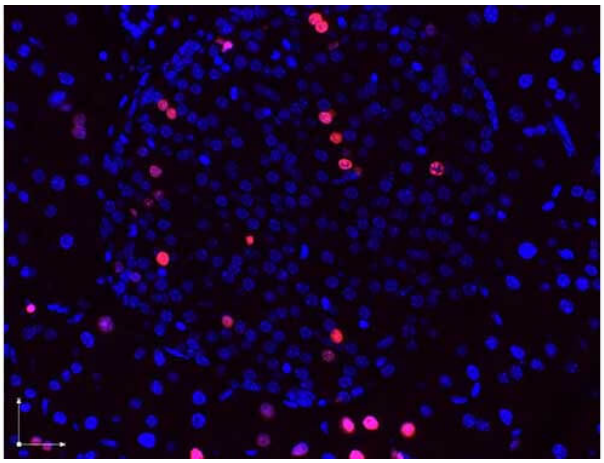
Images



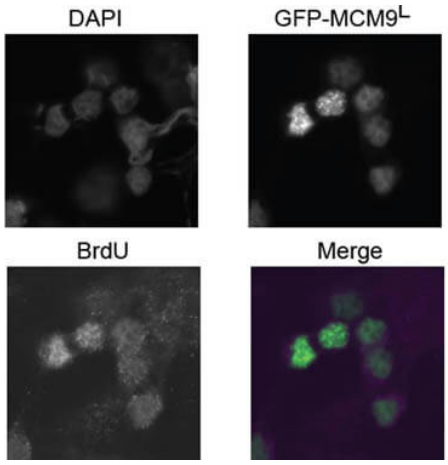
Immunohistochemistry
SOX2 represses proliferation in the developing spinal cord and stomach.(A) Percentage of cells expressing high or low levels of SOX2 labelled by a one hour pulse of BrdU in the E11.5 mouse spinal cord. Dotted lines in insets surround area of greatest BrdU incorporation. (B) Average background normalized SOX2 expression level and percentage of cells labelled by a one hour pulse of BrdU in the E11.5, E13.5 and E15.5 anterior and posterior stomach. (C) Percentage of electroporated cells in the chick spinal cord labelled by a 30 minute pulse of BrdU following misexpression of GFP, SOX2 or dnSOXB1. (D) Percentage of electroporated cells in E13.5 stomach explants labelled by a 30 minute pulse of BrdU following overexpression of GFP, SOX2 or dnSOXB1. All error bars represent standard deviations between experiments and p-values are calculated with two sided, unpaired t-tests (* = $p<0.05$, ** = $p<0.01$, *** = $p<0.001$). Figure provided by CiteAb. Source: PLoS Genet, PMID: 29432416.

Diagram
Bromodeoxyuridine (BrdU) chemical structure representation.





Immunofluorescence Microscopy
Immunofluorescence microscopy images of paraformaldehyde-fixed, paraffin-embedded pancreas sections stained with antibodies against BrdU (red or pink) and counterstained with DAPI (blue) and imaged with a 40× objective. DAPI stained nuclei (blue) indicate non-dividing cells, immunostained red and pink nuclei indicate actively dividing pancreatic ß-cells. The antibodies were diluted to 2.7 µg/ml. and incubated with tissue sections overnight at 4 degrees. Donkey anti-rabbit secondary antibody was diluted 1:2500.



Immunofluorescence Microscopy
Immunofluorescence Microscopy of Rabbit anti-BrdU antibody. Tissue: 293T cells transfected expressing GFP-MCM9 L. Fixation: 0.5% PFA. Antigen retrieval: not required. Primary antibody: BrdU antibody at 10 µg/mL for 1 h at RT. Secondary antibody: Anti-rabbit ATTO550 secondary antibody at 1:10,000 for 45 min at RT. Localization: BrdU is nuclear. Staining: BrdU in merged image shows with green and purple fluorescent signal with DAPI nuclear counterstain.

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