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Datasheet for 200-301-H51

IdU Antibody

Overview

Description:	Anti-IdU (MOUSE) Monoclonal Antibody - 200-301-H51
Item No.:	200-301-H51
Size:	100 µg
Applications:	Dot Blot, ELISA, IHC
Reactivity:	IdU
Host Species:	Mouse

Product Details

Background:	Iododeoxyuridine (5-Iodo-2'-deoxyuridine, IdU) is a synthetic thymidine nucleoside analog. IdU, like BrdU thymidine analog, is used to allow the detection of growing or proliferating cells in living tissues. During the S-phase of cell division, DNA replication occurs, and IdU can be incorporated into the newly synthesized DNA by substituting for naturally occurring thymidine. Antibodies specific for IdU are subsequently used to detect the incorporated IdU 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-IdU antibody, Iododeoxyuridine, 5-iodo-2'-deoxyuridine
Host Species:	Mouse
Clonality:	Monoclonal
Clone ID:	32D8.D9
Format:	IgG

Target Details

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

Purity/Specificity:	Anti-IdU Monoclonal Antibody was purified from ascites fluid by Protein A chromatography. This antibody is specific for IdU. Cross-reactivity is not observed with CldU or FdU. Minimal reactivity observed with BrdU. Specific conditions for reactivity should be optimized by the end user.

Application Details

Tested Applications:	Dot Blot, ELISA
Suggested Applications:	IHC (Based on references)
Application Note:	Anti-IdU Antibody has been tested for slot blot, ELISA, and immunofluorescence microscopy. This antibody may be suitable for additional immunoassays including flow cytometry and immunohistochemistry. Expect to detect incorporated IdU thymidine analog from replicated cells. Specific conditions for reactivity should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:1000-1:10000
FC:	User Optimized
IF:	User Optimized
IHC:	User Optimized
WB:	1:2000-1:5000

Formulation

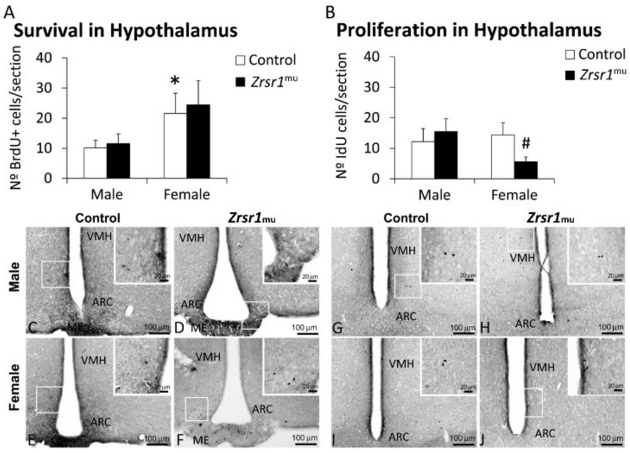
Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/ml by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

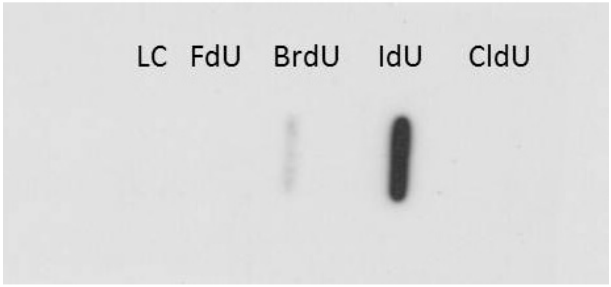
Shipping Condition:	Dry Ice
Storage Condition:	Store IdU Antibody at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable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

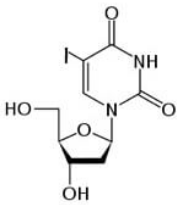


Immunofluorescence Microscopy
Newborn cell survival (A) and neural stem cell proliferation (B) respectively assessed by the number of BrdU- and IdU-immunoreactive (+) cells in the hypothalami of male and female wild-type and Zrsr1mu mice. Low- and high-resolution photomicrographs of representative images showing BrdU+ cells (C–F) and IdU+ cells (G–J). Arrowheads indicate labeled nuclei. Bars represent the mean ± SEM (n = 7–8/group). Tukey (A) or simple effect analysis (B): * $p < 0.05$ female vs. control male and # $p < 0.05$ wild-type vs. Zrsr1mu. ARC, arcuate nucleus; VMH, ventromedial hypothalamus; ME, median eminence.
Fig 6. PMID: 31331069



Western Blot
Western Blot of Anti-IdU 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-IdU 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/Observed: IdU. Other band(s): no cross reactive bands were observed for other nucleoside analogs.

Diagram
Iododeoxyuridine (IdU) chemical structure representation.



References

- Alen F et al. Sex-Dimorphic Behavioral Alterations and Altered Neurogenesis in U12 Intron Splicing-Defective Zrsr1 Mutant Mice. *Int J Mol Sci.* (2019)

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