Datasheet: MCA2483

Description:	MOUSE ANTI BrdU
Specificity:	BrdU
Other names:	5-BROMODEOXYURIDINE
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	Bu20a
Isotype:	IgG1
Quantity:	0.2 mg

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry (1)	▪			1/25 - 1/100
Immunohistology - Frozen	▪			
Immunohistology - Paraffin	▪			
Immunofluorescence	▪			
Immunocytochemistry (2)	▪			1/25 - 1/100

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

(1) Flow Cytometry protocols can be found at:
www.bio-rad-antibodies.com/brdu-clone-bu20a-flow-cytometry-protocol
www.bio-rad-antibodies.com/brdu-staining-cell-cycle-protocol
(2) BrdU labeling and immunostaining protocol can be found at:
www.bio-rad-antibodies.com/brdu-labeling-and-immunostaining-protocol

Target Species

Chemical

Product Form

Purified IgG - liquid

Preparation

Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant

Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide (NaN_3)
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	Bromodeoxyuridine conjugated to BSA
RRID	AB_1102864
Fusion Partners	Spleen cells from immunized Balb/c mice were fused with cells of the NS1 myeloma cell line
Specificity	**Mouse anti BrdU antibody, clone Bu20a** recognizes bromodeoxyuridine (known as BrdU or BrdUrd). BrdU is a synthetic thymidine analog, which is incorporated to new DNA during replication instead of thymidine. BrdU can therefore be used to identify newly synthesized DNA. Mouse anti BrdU antibody, clone Bu20a, recognizes BrdU and other thymidine analogs; 5′-chloro-2′-deoxyuridine (CldU), 5′-iodo-2′-deoxyuridine (IdU) and 2′-deoxy-5-ethynyluridine (EdU), but only shows minimal reactivity with thymidine itself (Aten *et al*. 1992, Liboska *et al*. 2012, Magaud *et al*. 1989). Antibody detection of incorporated BrdU in cellular DNA is extensively referenced as an accurate method to monitor cell proliferation *in vivo* and *in vitro*. In cell proliferation assays BrdU staining is coupled with the use of a dye that binds total DNA such as propidium iodide (PI). BrdU can be administered diluted in the culture medium or, *in vivo* via intraperitoneal injection, subcutaneous osmotic pump implants (Tesfaigzi *et al*. 2004) or in drinking water (Moser *et al*. 2004). BrdU can be used as a thymidine analog in a wide range of organisms ranging from mammalian cells, through reptiles and amphibians to invertebrate species and plants. Mouse anti BrdU antibody, clone Bu20a, is suitable for detecting incorporated BrdU in a wide variety of cell types and is suitable for use on tissue sections in double-labeling techniques (Makarev and Gorivodsky 2014).
Flow Cytometry	Use 10 µl of the suggested working dilution to label $1x10^6$ cells in 100 µl
References	1. Xie, L.L. *et al.* (2009) Aquaporin 4 knockout resists negative regulation of neural cell proliferation by cocaine in mouse hippocampus. Int J Neuropsychopharmacol. 12 (6): 843-50. 2. Wohl, S.G. *et al.* (2009) Optic nerve lesion increases cell proliferation and nestin expression in the adult mouse eye *in vivo*. Exp Neurol. 219 (1): 175-86. 3. Innis, S.M. *et al.* (2010) Perinatal lipid nutrition alters early intestinal development and programs the response to experimental colitis in young adult rats. Am J Physiol Gastrointest Liver Physiol. 299 (6): G1376-85.

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12. Furukawa, S. *et al.* (2017) Databases for technical aspects of immunohistochemistry. J Toxicol Pathol. 30 (1): 79-107.
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14. Berger, S. *et al.* (2020) Severe hydroxymethylbilane synthase deficiency causes depression-like behavior and mitochondrial dysfunction in a mouse model of homozygous dominant acute intermittent porphyria. Acta Neuropathol Commun. 8 (1): 38.
15. Wei, Z.Z. *et al.* (2021) DL-3-n-butylphthalide Increases Collateriogenesis and Functional Recovery after Focal Ischemic Stroke in Mice. Aging Dis. 12 (7): 1835-49.
16. Lee, H.J. *et al.* (2022) Effects of electroacupuncture on the functionality of NG2-expressing cells in perilesional brain tissue of mice following ischemic stroke Neural Regeneration Research. 17 (7): 1556.
17. Sideromenos, S. *et al.* (2022) The metabolic regulator USF-1 is involved in the control of affective behaviour in mice. Transl Psychiatry. 12 (1): 497.
18. Gundacker, A. *et al.* (2023) Early-life iron deficiency persistently disrupts affective behaviour in mice. Ann Med. 55 (1): 1265-77.

Storage	This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C. Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.
Guarantee	12 months from date of despatch

Health And Safety Information	Material Safety Datasheet documentation #10040 available at: https://www.bio-rad-antibodies.com/SDS/MCA2483 10040
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Rabbit Anti Mouse IgG (STAR12...)	RPE
Goat Anti Mouse IgG (H/L) (STAR117...)	FITC
Rabbit Anti Mouse IgG (STAR13...)	HRP
Rabbit Anti Mouse IgG (STAR9...)	FITC

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL (MCA928)

North & South America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com	**Worldwide**	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com	**Europe**	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets

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