Datasheet: MCA1558

BATCH NUMBER 160557

Description:	MOUSE ANTI PCNA
Specificity:	PCNA
Other names:	PROLIFERATING CELL NUCLEAR ANTIGEN
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	PC10
Isotype:	IgG2a
Quantity:	0.1 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)	▪			1/100
Immunohistology - Frozen	▪			
Immunohistology - Paraffin	▪			1/50 - 1/100
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting	▪			1/1000

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) **Membrane permeabilisation is required for this application. Bio-Rad recommends the use of Leucoperm™ (Product Code BUF09) for this purpose.**

Target Species

Rat

Species Cross Reactivity

Reacts with: Ferret, Chicken, Rabbit, Xenopus, Mouse, Horse, Sheep, Dog, Cat, Cynomolgus monkey, Rhesus Monkey, Hamster, Atlantic Salmon, Human, Bearded Dragon, Corn Snake, Nile Crocodile

Based on sequence similarity, is expected to react with:Vertebrates, Invertebrates

N.B. Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for

	further information.
Product Form	Purified IgG - liquid
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	Rat PCNA made in the protein A expression vector pR1T2T
External Database Links	**UniProt:** P04961 Related reagents **Entrez Gene:** 25737 Pcna Related reagents
RRID	AB_324955
Specificity	**Mouse anti PCNA antibody, clone PC10** recognizes the proliferating cell nuclear antigen, also known as PCNA or cyclin. PCNA is a 261 amino acid ~28 kDa nuclear protein vital for cellular DNA synthesis at the replication fork (Li *et al.* 1995) through its interaction with FEN1 (Wu *et al.* 1996). PCNA is the auxilliary protein for DNA polymerase δ (Bravo *et al.* 1987). PCNA is highly conserved between mammalian species and other vertebrates. Mouse anti PCNA antibody, clone PC10 has been used for the detection of PCNA in a number of species including human, rat, mouse (Park *et al.* 2008), chicken (Franz-Odendaal 2008) and abalone (Harris *et al.* 2006).
Flow Cytometry	Use 10ul of the suggested working dilution to label 1x10^6 cells in 100ul.
Immunohistology	This product does not require protein digestion pre-treatment of paraffin sections. This product does not require antigen retrieval using heat pre-treatment prior to staining of paraffin sections.
Histology Positive Control Tissue	Tonsil
References	1. Mathews, M.B. *et al.* (1984) Identity of the proliferating cell nuclear antigen and cyclin. Nature. 309 (5966): 374-6. 2. Ogata, K. *et al.* (1985) Purification and N-terminal amino acid sequence of proliferating cell nuclear antigen (PCNA)/cyclin and development of ELISA for anti-PCNA antibodies. J

Immunol. 135 (4): 2623-7.
3. Jenkins, H. *et al.* (1993) Nuclei that lack a lamina accumulate karyophilic proteins and assemble a nuclear matrix. J Cell Sci. 106: 275-85.
4. Landberg, G. *et al.* (1990) Flow cytometric multiparameter analysis of proliferating cell nuclear antigen/cyclin and Ki-67 antigen: a new view of the cell cycle. Exp Cell Res. 187 (1): 111-8.
5. Wilson, G.D. *et al.* (1992) Flow cytometric characterisation of proliferating cell nuclear antigen using the monoclonal antibody PC10. Eur J Cancer. 28A (12): 2010-7.
6. Prosperi, E. *et al.* (1993) Proliferating cell nuclear antigen complex formation induced by ultraviolet irradiation in human quiescent fibroblasts as detected by immunostaining and flow cytometry. Exp Cell Res. 205 (2): 320-5.
7. Elsässer, H.P. *et al.* (1994) Growth of rat pancreatic acinar cells quantitated with a monoclonal antibody against the proliferating cell nuclear antigen. Cell Tissue Res. 276 (3): 603-9.
8. Harris, L. *et al.* (2006) Characterisation of cell types in abalone (Haliotis spp.) tissues using immunohistochemical techniques Aquaculture 261: 1413-21
9. Buggins, A.G. *et al.* (2001) Microenvironment produced by acute myeloid leukemia cells prevents T cell activation and proliferation by inhibition of NF-kappaB, c-Myc, and pRb pathways. J Immunol. 167: 6021-30.
10. Kapitonova, M.Y. *et al.* (2010) Immunohistochemical characteristics of the hypophysis in normal conditions and chronic stress. Neurosci Behav Physiol. 40: 97-102.
11. Franz-Odendaal, T.A. (2008) Toward understanding the development of scleral ossicles in the chicken, *Gallus gallus.* Dev Dyn. 237: 3240-51.
12. Hashimoto, Y. *et al.* (2010) Rad51 protects nascent DNA from Mre11-dependent degradation and promotes continuous DNA synthesis. Nat Struct Mol Biol. 17: 1305-11.
13. Fenton, M. *et al.* (2001) Cellular senescence after single and repeated balloon catheter denudations of rabbit carotid arteries. Arterioscler Thromb Vasc Biol. 21: 220-6.
14. Park, J.H. *et al.* (2008) Gastric lesions and immune responses caused by long-term infection with Helicobacter heilmannii in C57BL/6 mice. J Comp Pathol. 139: 208-17.
15. Izhak, L. *et al.* (2012) Dissecting the autocrine and paracrine roles of the CCR2-CCL2 axis in tumor survival and angiogenesis. PLoS One. 7: e28305.
16. Di-poï, N. & Milinkovitch, M.C. (2016) The anatomical placode in reptile scale morphogenesis indicates shared ancestry among skin appendages in amniotes. Sci Adv. 2 (6): e1600708.
17. Guzera, M. *et al.* (2016) *In Vitro* Influence of Mycophenolic Acid on Selected Parameters of Stimulated Peripheral Canine Lymphocytes. PLoS One. 11 (5): e0154429.
18. Khlebnikov, V. V. *et al.* (2015) Developmental Characteristics of the Hypothalamo-Hypophyseal-Adrenal System in Chronic Heterotypical Stress Neuroscience and Behavioral Physiology. 46 (1): 100-5.
19. Nakatsuka, M. & Kumabe, S (2018) Histological Alterations from Condyle Repositioning with Functional Appliances in Rats. J Clin Pediatr Dent. 42 (5): 391-7.
20. Falbo, L. *et al.* (2020) SSRP1-mediated histone H1 eviction promotes replication origin assembly and accelerated development. Nat Commun. 11 (1): 1345.

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/MCA1558 10040
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR77...)	HRP
Rabbit Anti Mouse IgG (STAR12...)	RPE
Goat Anti Mouse IgG IgA IgM (STAR87...)	Alk. Phos., HRP
Goat Anti Mouse IgG (STAR76...)	RPE
Rabbit Anti Mouse IgG (STAR13...)	HRP
Goat Anti Mouse IgG (STAR70...)	FITC
Goat Anti Mouse IgG (H/L) (STAR117...)	Alk. Phos., DyLight®488, DyLight®550, DyLight®650, DyLight®680, DyLight®800, FITC, HRP
Rabbit Anti Mouse IgG (STAR9...)	FITC
Goat Anti Mouse IgG (Fc) (STAR120...)	FITC, HRP

Recommended Negative Controls

MOUSE IgG2a NEGATIVE CONTROL (MCA1210)

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

'M386206:210519'

Printed on 04 Sep 2023