

Datasheet: MCA421

BATCH NUMBER 152460

Description:	RAT ANTI MOUSE IgG2a HEAVY CHAIN
Specificity:	IgG2a HEAVY CHAIN
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	LO-MG2a-7
Isotype:	IgG1
Quantity:	0.25 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			▪	
Immunohistology - Frozen			▪	
Immunohistology - Paraffin			▪	
ELISA	▪			5ug/ml as coating antibody
Immunoprecipitation			▪	
Western Blotting			▪	

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.

Target Species	Mouse
Product Form	Purified IgG - liquid
Preparation	Purified IgG prepared by affinity chromatography from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.1% Sodium Azide
Approx. Protein	IgG concentration 1.0mg/ml

Concentrations

Immunogen	Purified IgG from BALB/c mice.
-----------	--------------------------------

External Database Links

UniProt:

[P01863](#) [Related reagents](#)

[P01865](#) [Related reagents](#)

[P01864](#) [Related reagents](#)

Entrez Gene:

[380793](#) Igh-1a [Related reagents](#)

[380793](#) Igh-1a [Related reagents](#)

[380793](#) Igh-1a [Related reagents](#)

RRID	AB_321822
------	-----------

Fusion Partners	Spleen cells from immunised LOU/c rats were fused with cells of the rat IR983F myeloma cell line.
-----------------	---

Specificity	Rat anti Mouse IgG2a:Biotin, clone LO-MG2a-7 recognizes the gamma 2a heavy chain of mouse immunoglobulin and does not cross-react with other murine immunoglobulin classes or subclasses. Rat anti Mouse IgG2a Heavy Chain antibody, clone LO-MG2a-7 recognizes an allotypic determinant upon mouse IgG2a. It recognizes the IgH1a allotype (as expressed in Balb/c mice), but not the IgH1b allotype (as expressed in C57/BL mice).
-------------	---

References

1. Jarman, E.R. & Lamb, J.R. (2004) Reversal of established CD4+ type 2 T helper-mediated allergic airway inflammation and eosinophilia by therapeutic treatment with DNA vaccines limits progression towards chronic inflammation and remodelling. [Immunology. 112 \(4\): 631-42.](#)
2. Bazin, H. (1982) Production of rat monoclonal antibodies with the LOU rat non secreting IR983F myeloma cell line. Prot Biol Fluids 615 - 8. Pergamon Press, Oxford and New York.
3. Nagao, K. *et al.* (2003) Role of prostaglandin I2 in airway remodeling induced by repeated allergen challenge in mice. [Am J Respir Cell Mol Biol. 29: 314-20.](#)
4. Bazin, H. *et al.* (1984) Rat monoclonal antibodies. I. Rapid purification from in vitro culture supernatants. [J Immunol Methods. 66 \(2\): 261-9.](#)
5. Bazin, H. *et al.* (1984) Rat monoclonal antibodies. II. A rapid and efficient method of purification from ascitic fluid or serum. [J Immunol Methods. 71 \(1\): 9-16.](#)
6. Ramos, J.D.A. *et al.* (2009) Characterization of Biotin 11 Monoclonal Antibodies with Constant Region Mutations Phil Sci Lett 2: 38- 48.
7. Ormstad, H. *et al.* (2003) The effect of endotoxin on the production of IgE, IgG1 and IgG2a antibodies against the cat allergen Fel d 1 in mice [Toxicology. 188: 309-18.](#)
8. Ormstad, H. *et al.* (2000) The fungal cell wall component beta-1,3-glucan has an adjuvant effect on the allergic response to ovalbumin in mice. [J Toxicol Environ Health A. 61: 55-67.](#)
9. Hall, G. *et al.* (2003) Suppression of allergen reactive Th2 mediated responses and pulmonary eosinophilia by intranasal administration of an immunodominant peptide is

linked to IL-10 production. [Vaccine. 21: 549-61.](#)

10. Tan, L.K. *et al.* (2006) Intramuscular immunization with DNA construct containing Der p 2 and signal peptide sequences primed strong IgE production. [Vaccine. 24: 5762-71.](#)

11. Instanes, C. and Hetland, G. (2004) Deoxynivalenol (DON) is toxic to human colonic, lung and monocytic cell lines, but does not increase the IgE response in a mouse model for allergy. [Toxicology. 204: 13-21.](#)

12. Liedén, A. *et al.* (2009) Cornulin, a marker of late epidermal differentiation, is down-regulated in eczema. [Allergy. 64:304-11.](#)

13. Wolfowicz, C.B. *et al.* (2003) Expression and immunogenicity of the major house dust mite allergen Der p 1 following DNA immunization. [Vaccine. 21: 1195-204.](#)

14. Hayes, K.S. *et al.* (2017) Chronic *Trichuris muris* infection causes neoplastic change in the intestine and exacerbates tumour formation in APC min/+ mice. [PLoS Negl Trop Dis. 11 \(6\): e0005708.](#)

15. DeGiovanni, C. *et al.* (2019) Cancer Vaccines Co-Targeting HER2/Neu and IGF1R. [Cancers \(Basel\). 11 \(4\) Apr 11 \[Epub ahead of print\].](#)

Further Reading	1. Querinjean, P. <i>et al.</i> (1972) Transplantable immunoglobulin-secreting tumours in rats. Purification and chemical characterization of four kappa chains from LOU-Wsl rats. Eur J Biochem. 31 (2): 354-9.
------------------------	--

Storage	Store at +4°C or at -20°C if preferred.
----------------	---

This product should be stored undiluted.

Storage in frost free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

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/MCA421 10040
--------------------------------------	---

Regulatory	For research purposes only
-------------------	----------------------------

Related Products

Recommended Secondary Antibodies

Rabbit Anti Rat IgG (STAR16...)	DyLight@800
Rabbit Anti Rat IgG (STAR17...)	FITC
Goat Anti Rat IgG (STAR69...)	FITC
Goat Anti Rat IgG (STAR73...)	RPE
Rabbit Anti Rat IgG (STAR21...)	HRP
Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...)	DyLight@550 , DyLight@650 , DyLight@800
Goat Anti Rat IgG (STAR131...)	Alk. Phos. , Biotin
Goat Anti Rat IgG (STAR72...)	HRP

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
----------------------------------	---	------------------	---	---------------	---

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

'M367674:200529'

Printed on 31 Jan 2025

© 2025 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)