

Datasheet: MCA2098P

BATCH NUMBER 156094

Description:	MOUSE ANTI HUMAN IgG4:HRP
Specificity:	lgG4
Format:	HRP
Product Type:	Monoclonal Antibody
Clone:	HP6025
Isotype:	lgG1
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 <a href="www.bio-rad-antibodies.com/protocols">www.bio-rad-antibodies.com/protocols</a>.

	Yes	No	Not Determined	Suggested Dilution
Immunohistology - Frozen	•			1/40 - 1/80
Immunohistology - Paraffin	•			
ELISA	•			1/1000 - 1/20000
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	Human
Species Cross Reactivity	Reacts with: Chimpanzee  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 conjugated to Horseradish Peroxidase (HRP) - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein A
Buffer Solution	Phosphate buffered saline

Preservative Stabilisers	0.01% Thiomersal
Approx. Protein Concentrations	IgG concentration 1 mg/ml
Immunogen	Purified IgG4
External Database Links	UniProt: P01861 Related reagents  Entrez Gene: 3503 IGHG4 Related reagents
RRID	AB_323679
Fusion Partners	Spleen cells from BALB/c mice were fused with SP2/0 - Ag14 mouse myeloma cell line.
Specificity	Mouse anti Human IgG4 antibody, clone HP6025 recognizes the heavy chain of human IgG4, at an epitope in the Fc region. No cross-reactivity is observed with IgG1, IgG2, IgG3, IgM, IgA (Jefferis <i>et al.</i> 1985).  Elevated levels of IgG4 and of IgG4 presenting plasma cells are frequently seen in patients with autoimmune pancreatitis (IAP) and inflammatory bowel disease (Navaneethan <i>et al.</i> 2011) and it is suggested that IAP may develop as a paraneoplastic syndrome in some cancer patients (Shiokawa <i>et al.</i> 2013)
Histology Positive Control Tissue	Tonsil
References	1. Jefferis, R. <i>et al.</i> (1985) Evaluation of monoclonal antibodies having specificity for human IgG sub-classes: results of an IUIS/WHO collaborative study. Immunol Lett. 10 (3-4): 223-52.  2. Agaimy, A. <i>et al.</i> (2010) Calcifying fibrous tumor of the stomach: clinicopathologic and molecular study of seven cases with literature review and reappraisal of histogenesis. Am J Surg Pathol. 34: 271-8.  3. Strehl, J.D. <i>et al.</i> (2011) Numerous IgG4-positive plasma cells are ubiquitous in diverse localised non-specific chronic inflammatory conditions and need to be distinguished from IgG4-related systemic disorders. J Clin Pathol. 64 (3): 237-43.  4. Black, C.M. <i>et al.</i> (1991) Human markers for IgG2 and IgG4 appear to be on the same molecule in the chimpanzee. Immunology.72: 94-8.  5. Fernandez-Becerra, C. (2010) Naturally-acquired humoral immune responses against the N- and C-termini of the <i>Plasmodium vivax</i> MSP1 protein in endemic regions of Brazil and Papua New Guinea using a multiplex assay. Malar J. 9: 29.  6. Lee, H.W. <i>et al.</i> (2008) High levels of antibodies to <i>Plasmodium falciparum</i> liver stage antigen-1 in naturally infected individuals in Myanmar. Korean J Parasitol. 46: 195-8.  7. Shiokawa, M. <i>et al.</i> (2013) Risk of cancer in patients with autoimmune pancreatitis. Am J Gastroenterol. 108 (4): 610-7.

- 8. Whelan, S.F. *et al.* (2013) Distinct characteristics of antibody responses against factor VIII in healthy individuals and in different cohorts of hemophilia A patients. <u>Blood. 121:</u> 1039-48.
- 9. Fujimoto, M. *et al.* (2013) Stromal plasma cells expressing immunoglobulin G4 subclass in non-small cell lung cancer. <u>Hum Pathol. 44 (8): 1569-76.</u>
- 10. Miyagawa-Hayashino, A. *et al.* (2009) High ratio of IgG4-positive plasma cell infiltration in cutaneous plasmacytosis--is this a cutaneous manifestation of IgG4-related disease? <u>Hum Pathol. 40: 1269-77.</u>
- 11. Yamashita, K. *et al.* (2008) Lung involvement in IgG4-related lymphoplasmacytic vasculitis and interstitial fibrosis: report of 3 cases and review of the literature. <u>Am J Surg Pathol.</u> 32: 1620-6.
- 12. Yamashita, K. *et al.* (2008) Degree of IgG4+ plasma cell infiltration in retroperitoneal fibrosis with or without multifocal fibrosclerosis Histopathology. 52: 404-9.
- 13. Navaneethan, U. *et al.* (2011) Tissue infiltration of IgG4+ plasma cells in symptomatic patients with ileal pouch-anal anastomosis <u>J Crohns Colitis</u>. 5: 570-6.
- 14. Shiokawa, M. *et al.* (2013) Risk of cancer in patients with autoimmune pancreatitis. Am J Gastroenterol. 108 (4): 610-7.
- 15. Engelmann, R. *et al.* (2015) Bone resorption correlates with the frequency of CD5<sup>+</sup> B cells in the blood of patients with rheumatoid arthritis. Rheumatology (Oxford). 54 (3): 545-53.
- 16. Ráty, S. *et al.* (2015) Tumor-like Chronic Pancreatitis Is Often Autoimmune Pancreatitis. Anticancer Res. 35 (11): 6163-6.
- 17. Agaimy, A. *et al.* (2015) SMARCA4-deficient undifferentiated carcinoma of the ovary (small cell carcinoma, hypercalcemic type): clinicopathologic and immunohistochemical study of 3 cases. <u>Ann Diagn Pathol. 19 (5): 283-7.</u>
- 18. Riedemann, N.C. *et al.* (2017) Controlling the anaphylatoxin C5a in diseases requires a specifically targeted inhibition. <u>Clin Immunol. 180: 25-32.</u>
- 19. Pan, Q. *et al.* (2016) Association between IgG4 Autoantibody and Complement Abnormalities in Systemic Lupus Erythematosus. <u>Mediators Inflamm. 2016: 2196986.</u>
- 20. Engelmann, R. *et al.* (2018) Decreased IgG4 ACPA levels in responders and increased CD1c<sup>+</sup> classical dendritic cells in non-responders of patients with rheumatoid arthritis under therapy. <u>Clin Rheumatol. 37 (7): 1783-90.</u>

#### **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 #10094 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA2098P">https://www.bio-rad-antibodies.com/SDS/MCA2098P</a>
Regulatory	For research purposes only

# **Related Products**

# **Recommended Useful Reagents**

AbGUARD® HRP STABILIZER PLUS (BUF052A)

AbGUARD® HRP STABILIZER PLUS (BUF052B)

AbGUARD® HRP STABILIZER PLUS (BUF052C)

TMB CORE (BUF056A)

TMB CORE+ (BUF062A)

TMB SIGNAL+ (BUF054A)

Product inquiries: www.bio-rad-antibodies.com/technical-support

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets 'M379530:210326'

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