

Datasheet: MCA71R

Description:	RAT ANTI HUMAN HLA DR
Specificity:	HLA DR
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	YE2/36-HLK
Isotype:	IgG2a
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	■			1/50 - 1/100
Immunohistology - Frozen	■			
Immunohistology - Paraffin (1)	■			
ELISA			■	
Immunoprecipitation			■	
Western Blotting			■	

Where this product 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 product for use in their own system using appropriate negative/positive controls.

(1) **PLP fixation is recommended for optimal results, see [Whiteland et al.](#) for details**

Target Species	Human
Product Form	Purified IgG - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein G
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	EHR-B Ramos cells.

Fusion Partners	Spleen cells from immunised AO rats were fused with cells of the rat Y3 Ag1.2.3 myeloma cell line.
Specificity	Rat anti Human HLA DR antibody, clone YE2/36-HLK recognizes a monomorphic determinant of human HLA DR which is an MHC class II cell surface receptor expressed primarily on antigen presenting cells such as B lymphocytes, monocytes, macrophages and activated T lymphocytes. The major histocompatibility complex (MHC) is a cluster of genes that are important in the immune response to infections. In humans, this complex is referred to as the human leukocyte antigen (HLA) region. There are 3 major MHC class II proteins encoded by the HLA which are HLA DP, HLA DQ and HLA DR. Rat anti Human HLA DR antibody, clone YE2/36-HLK has also been reported to be cross reactive with mouse H-2 haplotypes b, d and q expressed by mouse strains including C57BL/6, DBA, and NZB (Brickell, P.M. et al. 1981).
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells in 100ul.
References	1. Brickell, P.M. <i>et al.</i> (1981) A monoclonal antibody to the HLA-DR product recognizes a polymorphic Ia determinant in mice. Immunology. 43: 493-501. 2. Whiteland, J.L. <i>et al.</i> (1995) Immunohistochemical detection of T-cell subsets and other leukocytes in paraffin-embedded rat and mouse tissues with monoclonal antibodies. J Histochem Cytochem. 43 (3): 313-20. 3. Bellinghausen, I.<i>et al.</i> (2003) Production of interleukin-13 by human dendritic cells after stimulation with protein allergens is a key factor for induction of T helper 2 cytokines and is associated with activation of signal transducer and activator of transcription-6. Immunology. 108:167-176. 4. Thorne, A. <i>et al.</i> (2015) Tumor necrosis factor-α promotes survival and phenotypic maturation of poly(I:C)-treated dendritic cells but impairs their Th1 and Th17 polarizing capability. Cytotherapy. pii: S1465-3249(14)00857-3. 5. Nguyen Hoang, A.T. <i>et al.</i> (2012) Dendritic cell functional properties in a three-dimensional tissue model of human lung mucosa. Am J Physiol Lung Cell Mol Physiol. 302 (2): L226-37. 6. Zuo, J. <i>et al.</i> (2009) The Epstein-Barr virus G-protein-coupled receptor contributes to immune evasion by targeting MHC class I molecules for degradation. PLoS Pathog. 5(1): e1000255. 7. Walter, W. <i>et al.</i> (2001) H2-Mbeta 1 and H2-Mbeta 2 heterodimers equally promote clip removal in I-A(q) molecules from autoimmune-prone DBA/1 mice. J Biol Chem. 276: 11086-91. 8. Cruchley, A.T. <i>et al.</i> (1987) Dual expression of the cell-surface antigens HLA-DR and CD1 (T6) by Langerhans cells in human buccal mucosa and skin. Arch Oral Biol. 32: 849-53. 9. Hietbrink, F. <i>et al.</i> (2011) Intramedullary nailing of the femur and the systemic activation of monocytes and neutrophils World J Emerg Surg. 6: 34. 10. Shimada, A. <i>et al.</i> (2006) Translocation pathway of the intratracheally instilled ultrafine particles from the lung into the blood circulation in the mouse. Toxicol Pathol. 34: 949-57. 11. Thornhill, M.H. <i>et al.</i> (1989) Enhanced adhesion of autologous lymphocytes to gamma-interferon-treated human endothelial cells in vitro. Br J Exp Pathol. 70: 59-64. 12. Jonuleit, H. <i>et al.</i> (2000) Induction of interleukin 10-producing, nonproliferating CD4(+) T cells with regulatory properties by repetitive stimulation with allogeneic immature human dendritic cells. J Exp Med. 192: 1213-22. 13. Colić, M. <i>et al.</i> (2006) Correlation between phenotypic characteristics of mononuclear cells isolated from human periapical lesions and their in vitro production of Th1 and Th2 cytokines. Arch Oral Biol. 51: 1120-30. 14. Becker, D. <i>et al.</i> (1997) Flow-cytometric screening for the modulation of receptor-mediated endocytosis in human dendritic cells: implications for the development of an in vitro technique for predictive testing of contact sensitizers. J Immunol Methods. 203: 171-80. 15. Klotz, B. <i>et al.</i> (2012) 1,25-Dihydroxyvitamin D3 Treatment Delays Cellular Aging in Human

Mesenchymal Stem Cells while Maintaining Their Multipotent Capacity. [PLoS One. 7: e29959.](#)
 16. Hietbrink F *et al.* (2015) The Impact of Intramedullary Nailing of Tibia Fractures on the Innate Immune System. [Shock. 44 \(3\): 209-14.](#)
 17. GarikipatiV, N.S. *et al.* (2018) Isolation and characterization of mesenchymal stem cells from human fetus heart. [PLoS One. 13 \(2\): e0192244.](#)

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.
Shelf Life	18 months from date of despatch.
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: 10040: https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Rabbit Anti Rat IgG (STAR16...)	DyLight®800
Goat Anti Rat IgG (STAR73...)	RPE
Rabbit Anti Rat IgG (STAR21...)	HRP
Rabbit Anti Rat IgG (STAR17...)	FITC
Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...)	DyLight®549 , DyLight®649 , DyLight®800
Goat Anti Rat IgG (STAR131...)	Alk. Phos. , Biotin
Goat Anti Rat IgG (STAR69...)	FITC
Goat Anti Rat IgG (STAR72...)	HRP

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