Datasheet: MCA333S

Description:	CHIMERIC HUMAN IgE ANTI NP
Specificity:	CHIMERIC HUMAN IgE ANTI NP
Format:	S/N
Product Type:	Monoclonal Antibody
Clone:	JW8/1
Isotype:	IgE
Quantity:	2 ml

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	▪			1/20 - 1/100
Immunoprecipitation			▪	
Western Blotting			▪	
Functional Assays (1)	▪			

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.
(1) **This product contains sodium azide, removal by dialysis is recommended prior to use in functional assays.**

Target Species	Human
Product Form	Tissue Culture Supernatant - liquid
Preparation	Tissue Culture Supernatant containing 0.2M Tris/HCl pH7.4 and 5-10% foetal calf serum
Buffer Solution	None present
Preservative Stabilisers	0.09% Sodium Azide
Immunogen	Hapten, 4-hydroxy-3-nitrophenylacetyl (NP).

RRID	AB_567284
Fusion Partners	Plasmids containing chimaeric heavy chain gene were fused with cells of the J558L mouse myeloma cell line.
Specificity	The immunoglobulin heavy chain has been produced by the linking of the antigen-binding, variable region genes of a mouse hybridoma to human constant region genes by *in vitro* DNA recombination procedures. The resulting chimeric antibody is subsequently expressed by the myeloma cell-line J558L after transfection. (The J558L cell-line self secretes a lambda light chain but no heavy chain). Thus a chimeric human IgE antibody specific for NP has been produced.
References	1. Neuberger, M.S. *et al.* (1984) Recombinant antibodies possessing novel effector functions. Nature. 312 (5995): 604-8. 2. Neuberger, M.S. *et al.* (1985) A hapten-specific chimaeric IgE antibody with human physiological effector function. Nature. 314 (6008): 268-70. 3. Novak, N. *et al.* (2003) Evidence for a differential expression of the FcepsilonRIgamma chain in dendritic cells of atopic and nonatopic donors. J Clin Invest. 111: 1047-56. 4. Sayers, I. *et al.* (2004) The importance of Lys-352 of human immunoglobulin E in FcepsilonRII/CD23 recognition. J Biol Chem. 279: 35320-5. 5. Kulka, M. and Metcalfe, D.D. (2004) High-resolution tracking of cell division demonstrates differential effects of TH1 and TH2 cytokines on SCF-dependent human mast cell production in vitro: correlation with apoptosis and Kit expression. Blood. 105: 592-9. 6. Vangelista, L. *et al.* (2005) Membrane IgE binds and activates Fc epsilon RI in an antigen-independent manner. J Immunol. 174: 5602-11. 7. Sawada, J. *et al.* (2005) Stem cell factor has a suppressive activity to IgE-mediated chemotaxis of mast cells. J Immunol. 174: 3626-32. 8. Sallmann, E. *et al.* (2011) High-Affinity IgE Receptors on Dendritic Cells Exacerbate Th2-Dependent Inflammation. J Immunol. 187: 164-71. 9. Xu, D. *et al.* (2012) RN486, a selective Bruton's tyrosine kinase inhibitor, abrogates immune hypersensitivity responses and arthritis in rodents. J Pharmacol Exp Ther. 341 (1): 90-103. 10. Ferguson, G.D. *et al.* (2016) A Novel Triazolopyridine-Based Spleen Tyrosine Kinase Inhibitor That Arrests Joint Inflammation. PLoS One. 11 (1): e0145705. 11. Shirley D *et al.* (2016) Resveratrol preferentially inhibits IgE-dependent PGD_2 biosynthesis but enhances TNF production from human skin mast cells. Biochim Biophys Acta. pii: S0304-4165(16)00015-5. 12. Troupin, A. *et al.* (2016) A Role for Human Skin Mast Cells in Dengue Virus Infection and Systemic Spread. J Immunol. 197 (11): 4382-4391. 13. Bratke, K. *et al.* (2017) Differential regulation of PD-1 and its ligands in allergic asthma. Clin Exp Allergy. 47 (11): 1417-25. 14. Burton, O.T. *et al.* (2017) A humanized mouse model of anaphylactic peanut allergy J Allergy Clin Immunol139 (1): 314-22.e9. 15. McHale, C. *et al.* (2018) Interleukin-6 potentiates FcεRI-induced PGD(2) biosynthesis and induces VEGF from human in situ-matured skin mast cells. Biochim Biophys Acta Gen Subj. 1862 (5): 1069-78.

16. Shan, M. *et al.* (2018) Secreted IgD Amplifies Humoral T Helper 2 Cell Responses by Binding Basophils via Galectin-9 and CD44. Immunity. 49 (4): 709-724.e8.
17. Mohammed, Z. *et al.* (2022) miR-155 Is a Positive Regulator of FcεRI-Induced Cyclooxygenase-2 Expression and Cytokine Production in Mast Cells. Front Allergy. 3: 835776.

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 #10053 available at: https://www.bio-rad-antibodies.com/SDS/MCA333S 10053
Regulatory	For research purposes only

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To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
'M428574:240301'

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