

Datasheet: MCA472S

Description:	MOUSE ANTI RAT TCR V BETA 16.1
Specificity:	TCR V BETA 16 .1
Format:	S/N
Product Type:	Monoclonal Antibody
Clone:	HIS42
Isotype:	IgG2b
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 (1)	▪			1/10
Immunohistology - Paraffin		▪		
ELISA			▪	
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.

(1)The epitope recognised by this antibody is reported to be sensitive to formaldehyde fixation and tissue processing. Bio-Rad recommends the use of acetone fixation for frozen sections.

Target Species	Rat
Product Form	Tissue Culture Supernatant - liquid
Preservative Stabilisers	0.09% Sodium Azide
Immunogen	PVG RT7.2 Rat Thymocytes.
Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells of the mouse Sp2/0 myeloma cell line.
Specificity	Mouse anti Rat TCR V beta 16.1 antibody, clone HIS42 detects a minor subset of T cells. The subpopulation of HIS 42 positive T cells contains both CD4 and CD8 positive cells, in the same ratio as found in the peripheral T cell population. When bound to Sepharose beads, HIS 42 induces T cell proliferation in the presence of IL-2. In contrast to lymph node T cells a number of thymocytes are found to express HIS 42 only in the cytoplasm or together with membrane

expression. Most bright HIS 42 surface labelled thymocytes are also positive for MRC OX-44, a marker predominantly identifying mature thymocytes. SDS PAGE analysis of the membrane molecules immunoprecipitated by HIS 42 shows a band at 85 kDa. On reduction it separates to two bands at 35 kDa and 48 kDa. From this data it is concluded that HIS 42 is directed against a determinant on the rat T cell receptor, which is common to a small number of T cells. Preliminary data suggests that the determinant is found on the beta chain, associated with the Vbeta16.1 gene product ([Kampinga et al. 1989](#)).

Flow Cytometry Use 10ul of the suggested working dilution to label 10⁶ cells in 100ul.

References

1. Kampinga, J. *et al.* (1989) A monoclonal antibody to a determinant of the rat T cell antigen receptor expressed by a minor subset of T cells. [Int Immunol. 1 \(3\): 289-95.](#)
2. Hanaoka, M. *et al.* (2010) Immunomodulatory Strategies Prevent the Development of Autoimmune Emphysema. [Respir Res. 11: 179.](#)
3. Matsumoto, Y. *et al.* (2000) Successful TCR-based immunotherapy for autoimmune myocarditis with DNA vaccines after rapid identification of pathogenic TCR. [J Immunol. 164 \(4\): 2248-54.](#)

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

This product should be stored undiluted. 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 available at:
Material Safety Datasheet Documentation #10055 available at:
<https://www.bio-rad-antibodies.com/uploads/MSDS/10055.pdf>

Regulatory For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR76...) [RPE](#)
Goat Anti Mouse IgG IgA IgM (STAR87...) [Alk. Phos.](#), [HRP](#)
Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight@488](#), [DyLight@549](#),
[DyLight@649](#), [DyLight@680](#), [DyLight@800](#),
[FITC](#), [HRP](#)
Rabbit Anti Mouse IgG (STAR9...) [FITC](#)
Goat Anti Mouse IgG (STAR77...) [HRP](#)
Rabbit Anti Mouse IgG (STAR12...) [RPE](#)
Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)
Rabbit Anti Mouse IgG (STAR8...) [DyLight@800](#)
Goat Anti Mouse IgG (STAR70...) [FITC](#)
Rabbit Anti Mouse IgG (STAR13...) [HRP](#)
Human Anti Mouse IgG2b (HCA038...) [FITC](#), [HRP](#)

Recommended Negative Controls

[MOUSE IgG2b NEGATIVE CONTROL \(MCA691\)](#)

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