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BM4095 Monoclonal Antibody to MHC Class II (I-A k,s,r) - Purified

Quantity: 0.1 mg

Concentration: 0.2 mg/ml (after reconstitution)

Host / Isotype: Rat / IgG2b

Clone: ER-TR2

Immunogen: Murine thymic reticulum
Remarks: MHC Class II antigens are heterodimers consisting of one α-chain (31-34kDa) and one β-chain (26-29kDa). The epitope has not been further characterized.

Format:
State: Lyophilized purified Ig fraction
Purification: Affinity Chromatography
Buffer System: Phosphate buffered saline, pH 7.2 (PBS)
Preservatives: 0.01% Thimerosal
Stabilizers: 10 mg/ml BSA
Reconstitution: Restore with 0.5 ml distilled water (=stock solution).

Applications:
Immunohistochemistry on Frozen Sections: 1 µg/ml (1/200).
Suggested Positive Control: Mouse spleen.
Has been described to work in **FACS.**
Does not react on routinely processed paraffin sections.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity:
This antibody detects cells expressing MHC class II antigens.
Monoclonal antibody ER-TR2 is one member of a family of monoclonal antibodies (ER-TR3, ER-TR2, ER-TR1) which detect MHC class II antigens encoded by the murine Ia region of the H-2 complex. They are valuable tools for studying T helper cell interaction with class II positive antigen presenting cells (dendritic cells, B-cells, macrophages). These antibodies also offer new possibilities for studying the development of T helper cells since they also stain stromal cells in the thymus.
Isolated cells: The antigen is found on dendritic cells, B-cells and macrophages. The level of antigen detected by ER-TR1, ER-TR2 and ER-TR3 differs from strain to strain (see table on back).
Tissue Sections: The antigen is found on B-cells, interdigitating cells and macrophages in peripheral lymphoid organs but is absent from T-cells. It is also expressed as a fine reticular pattern on stromal thymic cells of the cortex and as a confluent pattern on stromal thymic cells of the medulla.
Species: Mouse. Does not work in Human.
Other species not tested.

Storage:
Store lyophilized product at 2-8 °C.
Following reconstitution store (in aliqouts) at -20°C.
Avoid repeated freezing and thawing.
Shelf life: One year from despatch.

General Readings:

Van Vliet, E., et al.: Monoclonal Antibodies to Stromal Cell Types of the Mouse Thymus. Eur. J. Immunol. 14: 524-529 (1984)
Van Vliet, E., et al.: Stromal Cell Types in the Developing Thymus of the Normal and Nude Mouse Embryo. Eur. J. Immunol. 15: 675-681 (1985)

Protocols:

Protocol with frozen, ice-cold acetone-fixed sections:
The whole procedure is performed at room temperature
1. Wash in PBS
2. Block endogenous peroxidase
3. Wash in PBS
4. Block with 10 % normal goat serum in PBS for 30 min. in a humid chamber
5. Incubate with primary antibody (dilution see datasheet) for 1h in a humid chamber
6. Wash in PBS
7. Incubate with secondary antibody (peroxidase-conjugated goat anti rat IgG (H+L) minimal-cross reaction to mouse) for 1h in a humid chamber
8. Wash in PBS
9. Incubate with AEC substrate (3-amino-9-ethylcarbazol) for 12min.
10. Wash in PBS
11. Counterstain with Mayer's hemalum

Pictures:

Distribution of ER-TR1, ER-TR2 and ER-TR3 among mouse strains with independent and recombinant haplotypes*

Strain	Haplotype							Clone		
	K	A	B	J	E	C	D	ER-TR1	ER-TR2	ER-TR3
C3H/HeJ	k	k	k	k	k	k	k	48*	46	46
AKR	k	k	k	k	k	k	k	54	52	54
B10.BR	k	k	k	k	k	k	k	59	58	62
B10.ScSn	b	b	b	b	b	b	b	4	5	50
Balb/b	b	b	b	b	b	b	b	4	3	39
B10.D2/n	d	d	d	d	d	d	d	56	5	54
Balb/c	d	d	d	d	d	d	d	45	3	44
DBA/2	d	d	d	d	d	d	d	27	4	47
B10.G	q	q	q	q	q	q	q	53	4	46
DBA/1	q	q	q	q	q	q	q	52	6	54
SWR/J	q	q	q	q	q	q	q	49	3	49
A.SW	s	s	s	s	s	s	s	4	20	6
B10.M	f	f	f	f	f	f	f	4	5	3
B10.RIII	r	r	r	r	r	r	r	39	39	40
B10.AQR	q	k	k	k	k	d	d	52	52	51
B10.T(6R)	q	q	q	q	q	q	d	50	3	52
A.TL	s	k	k	k	k	k	d	29	52	51
A.TH	s	s	s	s	s	s	d	5	49	7

* Percentage of labelled cells, determined by FACS analysis of spleen cell suspensions