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Monoclonal Antibody To Mouse MHC Class II

Monoclonal antibody ER-TR3 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, corresponding to the human HLA-DR region. 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.

Product Number:	T-2106 (Lot 04PO0903)
Clone:	ER-TR3
Host species, isotype:	Rat IgG2b
Quantity:	150µg
Format:	Affinity purified, lyophilized
	Reconstitute by adding 0.5ml distilled water. This stock solution contains 0.3mg/ml IgG, phosphate buffered saline pH 7.2 (PBS), 5mg/ml bovine serum albumin (BSA) as a stabilizer and 0.09% sodium azide as a preservative.
Stability:	Original vial: 1 year at 4° - 8°C
	Stock solution: 1 year at -20°C. Avoid repeated thawing and freezing.
Applications:	Tested for immunohistochemistry (IHC); has been described to work in FACS.
	Approximate working dilution for IHC: Frozen sections: 1.5µg/ml (1:200) Paraffin sections: does not react on routinely processed paraffin sections.
	Optimal dilutions should be determined by the end user.
	Suggested positive control: Mouse spleen.
	Please see **www.bma.ch** for protocols and general information.
Immunogen:	Murine thymic reticulum.
Antigen, epitope:	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.

Antigen distribution

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 below).

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.

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 labeled cells, determined by FACS analysis of spleen cell suspensions

Specificity:

Mouse: cells expressing MHC class II antigens

Other species: negative on human, other unknown

Selected references

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)

For in vitro research only. Caution: this product contains sodium azide, a poisonous and hazardous substance.