

BM4094B**Monoclonal Antibody to MHC Class II (I-A k,b,d,q,r) - Biotin****Quantity:** 0.2 mg**Concentration:** 0.4 mg/ml

Background: MHC Class II antigens are heterodimers consisting of one alpha chain (31-34kD) and one beta chain (26-29kD). The family of monoclonal antibodies (ER-TR3, ER-TR2, ER-TR1) detect MHC class II antigens encoded by the murine Ia region of the H-2 complex, corresponding to the Human HLA-DR region. MHC Class II antigens are a valuable tool for studying T helper cell interaction with class II positive antigen presenting cells (dendritic cells, B cells, macrophages) and offer new possibilities for studying the development of T helper cells since these antibodies also stain stromal cells in the thymus. MHC Class II antigens are also inducible on a number of other cells (endothelium and epithelial cells) by interferon gamma.

Host / Isotype: Rat / IgG2b**Recommended Isotype Controls:** SM19B**Clone:** ER-TR3**Immunogen:** Murine thymic reticulum

Remarks: Antigen / Epitope: MHC Class II antigens are heterodimers consisting of one alpha-chain (31-34 kDa) and one beta-chain (26-29 kDa).

The epitope has not been further characterized.

Format: **State:** Lyophilized purified Ig fraction**Purification:** Affinity Chromatography

Buffer System: Stock Solution contains PBS, pH 7.2 with 5 mg/ml BSA as a stabilizer with no preservative

Label: Biotin**Reconstitution:** Restore with 0.5 ml distilled water.**Applications:** **Immunohistochemistry on Frozen Sections:** 4 µg/ml (1/100).

Suggested Positive Control: Mouse spleen.

Does not react on routinely processed paraffin sections.

Has been reported to work in **Flow Cytometry**.

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-TR3 detects MHC class II antigens encoded by the murine Ia region of the H-2 complex, corresponding to the human HLA-DR region. It is a valuable tool for studying T-helper cell interaction with class II positive antigen presenting cells (dendritic cells, B-cells, macrophages). This antibody also offers new possibilities for studying the development of T-helper cells since it also stains stromal cells in the thymus.

Antigen Distribution

Isolated Cells: The antigen is found on dendritic cells, B-cells and macrophages.

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 Reactivity:

Tested: Mouse (Cells expressing MHC class II antigens). Does not react with Human.

Storage:

Store lyophilized at 2-8°C and reconstituted at -20°C. Avoid repeated freezing and thawing.

Shelf life: One year from despatch.

General Readings:

1. Van Vliet E, Melis M, Van Ewijk W. Monoclonal antibodies to stromal cell types of the mouse thymus. Eur J Immunol. 1984 Jun;14(6):524-9. PubMed PMID: 6734714.
2. Van Vliet E, Jenkinson EJ, Kingston R, Owen JJ, Van Ewijk W. Stromal cell types in the developing thymus of the normal and nude mouse embryo. Eur J Immunol. 1985 Jul;15(7):675-81. PubMed PMID: 4007044.

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

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