

BM4094S**Monoclonal Antibody to MHC Class II (I-A k,b,d,q,r) - Purified****Quantity:** 0.1 mg**Concentration:** 0.1 mg/ml

Background: MHC class II molecules are heterodimers of non-covalently associated alpha (31-34 kDa) and beta (26-29 kDa) chains. Major histocompatibility complex class II antigen presentation requires the participation of lysosomal proteases in two convergent processes. First, the antigens endocytosed by the antigen-presenting cells must be broken down into antigenic peptides. Second, class II molecules are synthesized with their peptide-binding site blocked by invariant chain (Ii), and they acquire the capacity to bind antigens only after Ii has been degraded in the compartments where peptides reside. MHC class II molecules present exogenously derived antigen to CD4+ T lymphocytes, which are usually T helper cells. CD4 interacts with non-polymorphic residues of MHC Class II.

Host / Isotype: Rat / IgG2b**Clone:** ER-TR3

Format: **State:** Liquid 0.2 µm filtered Ig fraction
Purification: Protein G
Buffer System: PBS
Preservatives: 0.02% sodium azide
Stabilizers: 0.1% bovine serum albumin

Applications: Immunohistochemistry on frozen sections: The typical starting working dilution is 1:50.
Flow cytometry: The typical starting working dilution is 1:50.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: The monoclonal antibody ER-TR3 reacts with mouse major histocompatibility complex class II (MHC class II), also known as I-A or I-E.
The monoclonal antibody ER-TR3 is a valuable tool for studying T helper cell interaction with class II positive antigen presenting cells (dendritic cells, B cells and macrophages) and for studying the development of T helper cells since they stain stromal cells in thymus. The level of antigen detected by ER-TR3 differs from strain to strain.

Species Reactivity: **Tested:** Mouse, human (tonsil)

Storage: Store at 2 - 8 °C.
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-TR3 among mouse strains with independent and recombinant haplotypes. * Percentage of labeled cells, determined by FACS analysis of spleen cell suspension

Strain	Haplotype	Clone
	B* A* J* E* C* D* ER-TR3*	
C3H/HeJ	k* k* l* k* k* k*	46
AKR	k* k* l* k* k* k*	54
B10.BR	k* k* l* k* k* k*	62
B10.SiSn	b* b* b* b* b* b*	50
Bab.b	b* b* b* b* b* b*	39
B10.D2n	d* d* d* d* d* d*	54
Bab/C	d* d* d* d* d* d*	44
DBA2	d* d* d* d* d* d*	47
B10.G	q* q* q* q* q* q*	46
DBA/1	q* q* q* q* q* q*	54
SWR/J	q* q* q* q* q* q*	40
A.SW	r* r* r* r* r* r*	6
B10.M	r* r* r* r* r* r*	3
B10.RIII	r* r* r* r* r* r*	40
B10.AGR	k* k* k* k* k* k*	51
B10.TBR	q* q* q* q* q* q*	52
ATL	k* k* k* k* k* k*	51
ATH	r* r* r* r* r* r*	7