

## CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

<b>Product name</b>	MHC class II, Mouse, clone ER-TR3	<b>Expiry date</b>	-
<b>Catalog number</b>	HM1087-100UG	<b>Amount</b>	100 µg
<b>Lot number</b>	-	<b>Concentration</b>	100 µg/ml
<b>Volume</b>	1 ml	<b>Conjugate</b>	None
<b>Formulation</b>	0.2 µm filtered in PBS+0.1%BSA+0.02%NaN3	<b>Purification</b>	Protein G
<b>Host Species</b>	Rat IgG2b		
<b>Endotoxin</b>	N.A.		
<b>Storage</b>	4°C		

### Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #								
Yes	•			•				
No								
N.D.		•	•		•	•	•	•

N.D.= Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50.

### General Information

#### Description

The monoclonal antibody ER-TR3 reacts with mouse major histocompatibility complex class II (MHC class II), also known as I-A or I-E. 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. 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. The monoclonal antibody ER-TR3 cross reacts with human MHC class II on tonsil.

Distribution of ER-TR3 among mouse strains with independent and recombinant haplotypes.

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

\* Percentage of labeled cells, determined by FACS analysis of spleen cell suspension

**References**

1. Van Vliet, E et al; Monoclonal antibodies to stromal cell types of the mouse thymus. Eur J Immunol 1984, 14: 524
2. Van Vliet, E et al; Stromal cell types in the developing thymus of the normal and nude mouse embryo. Eur J Immunol 1985, 15: 675

**Storage&stability**

Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.

**Precautions**

For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result from the use or derivation of this product.

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We hereby certify that the above-stated information is correct and that this product has been successfully tested by the Quality Control Department. This product was released for sale according to the existing specifications. This document has been produced electronically and is valid without a signature.

Approved by Manager of QC  
Brenda Teunissen

Date  
12/11/2019

Do you have any questions or comments regarding this product? Please contact us via [support@hycultbiotech.com](mailto:support@hycultbiotech.com).