

CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	SIGN-R1, Mouse, clone ER-TR9		
Catalog number	HM1080-1ML		
Lot number	-	Expiry date	-
Volume	1 ml	Amount	1 ml
Formulation	Culture medium+0.02%NaN3	Concentration	N.A.
Host Species	Rat IgM	Conjugate	None
Endotoxin	<24 EU/ml	Purification	N.A.
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #	1,2			4,5	3-6			
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.

- FC: Antibody ER-TR9 stains the extracellular domain of SIGN-R1. Peritoneal cells were pre-incubated with anti-CD16/32 to block FcγR before staining. As a negative control an isotype-matched antibody was used (Ref.6)
- IHC-F: Tissue sections were fixed in acetone and stained with antibody ER-TR9 using a two-step immunoperoxidase method (Ref.1).
- FS: Antibody ER-TR9 blocked the recognition of zymosan and C. albicans by peritoneal macrophages. An isotype-matched antibody was used as a negative control. The polysaccharide mannan was used as a positive control. (Ref.4). Before use for functional studies, we recommend to dialyse to remove the sodium azide added.
- Positive control: Peritoneal macrophages (Ref.4); Negative control: Alveolar macrophages (Ref.4).

General Information

Description The monoclonal antibody ER-TR9 recognizes murine SIGN-related 1 (SIGN-R1). Mouse SIGN-R1, a homolog of human DC-SIGN, is a 37 kDa type II transmembrane protein containing a single, C-terminal C-type lectin domain. SIGN-R1 is a specific marker for the identification of macrophage subpopulations present in the marginal zone of spleen (the so-called marginal zone macrophages (MZM)), in the lymph node medulla, and in the peritoneal cavity of some mouse strains. ER-TR9 does not react with macrophages in other regions of the spleen, such as CD169+ marginal metallophils and F4/80+ red pulp macrophages. In the spleen, the MZM function in trapping and clearance of blood-borne microbial antigens. SIGN-R1 mediates the uptake of encapsulated microbes, particularly through the recognition of microbial polysaccharides. Uptake of FITC-labeled dextran by macrophages can be blocked both in vivo and in vitro by the monoclonal antibody ER-TR9. Therefore, the monoclonal antibody ER-TR9 can be used to study the uptake of polysaccharides by macrophages.

Immunogen Mouse thymic stromal cells

- References**
- Dijkstra, C, et al; Marginal zone macrophages identified by a monoclonal antibody: characterization of immune- and enzyme-histochemical properties and functional capacities. Immunology 1985, 55: 23
 - Kretschmer, K, et al; The selection of marginal zone B cells differs from that of B-1a cells. J Immunol 2003, 171: 6495
 - Kang, Y et al; The C-type lectin SIGN-R1 mediates uptake of the capsular polysaccharide of Streptococcus pneumoniae in the marginal zone of mouse spleen. PNAS 2004, 101: 215
 - Taylor, P et al; The role of SIGN-R1 and the beta-glucan receptor (dectin-1) in the nonopsonic recognition of yeast by specific macrophages. J Immunol 2004, 172: 1157
 - Nagaoka, K et al; Association of SIGNR1 with TLR4-MD-2 enhances signal transduction by recognition of LPS in gram-negative bacteria. Int Immunol 2005, 17: 827
 - Takagi, H et al. Cooperation of specific ICAM-3 grabbing nonintegrin-related 1 (SIGNR1) and complement receptor type 3 (CR3) in the uptake of oligomannose-coated liposomes by macrophages. Glycobiology 2009, 19:258

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.

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
22/11/2019

Do you have any questions or comments regarding this product? Please contact us via support@hycultbiotech.com.