

CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	SIRL-1, Human, clone 1A5		
Catalog number	HM2309-20UG		
Lot number	-	Expiry date	-
Volume	200 µl	Amount	20 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA	Concentration	100 µg/ml
Host Species	Mouse IgG1	Conjugate	None
Endotoxin	<24 EU/mg	Purification	Protein G
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #				1	1		1	1
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.

- W: A non-reduced sample treatment and SDS-Page was used. The band sizes are 45 kDa and fainter band of 37 kDa in transfected cells and 37 kDa in granulocytes (Ref.1).
- FS: Antibody 1A5 showed inhibition of FcεRI-mediated degranulation by RBL-2H3 cells transfected with SIRL-1. The percentage of inhibition of degranulation by SIRL-1 was calculated by (OD405 TNP stimulation – OD405 TNP with SIRL-1 crosslinking)/(OD405 TNP stimulation – OD405 spontaneous release) x 100.

General Information

Description	The monoclonal antibody 1A5 recognizes human Signal inhibitory Receptor on Leucocytes-1 (SIRL-1). In order to prevent host tissue damage immune activation has to be tightly regulated. Neutrophils and other myeloid cells have a pivotal role in controlling infection. They form the primary response at site of infection as they regulate replication of pathogens by phagocytosis, secretion of antimicrobial peptides and proinflammatory cytokines to activate the immune system. Without regulation these mediators can cause tissue damage or worse. To balance the immune response immune cells can express inhibitory receptors. The family of immune inhibitory receptors is still expanding. The relatively new receptor SIRL-1 is an immunoreceptor tyrosine-based inhibitory motif (ITIM)-bearing membrane protein expressed on human phagocytes. SIRL-1 contains two ITIMs in the intracellular tail, which are crucial for function. SIRL-1 can recruit the SH2-domain containing tyrosine phosphatases, SHP-1 and SHP-2, which may mediate the inhibitory effect. ITIM-bearing receptors inhibit signals relayed by immunoreceptor tyrosine-based activating motifs (ITAMs). ITAMs are the principal mediators of signal transduction for various receptors, including FcRs and C-type lectins. The ligation of SIRL-1 dampens Fc receptor induced ROS production in phagocytes, thereby impairing the microbicidal activity of neutrophils without affecting phagocytosis. Infectious stimuli cause rapid downregulation of SIRL-1 expression. This allows microbial killing and clearance of pathogens. Neutrophil extracellular traps (NETs) have been implicated in the pathogenesis of systemic lupus erythematosus (SLE). Using anti SIRL-1 antibodies both spontaneous anti-neutrophil antibody induced NET formation is suppressed. This suggests a regulatory role for SIRL-1 in NET formation and a therapeutic target for regulation of SLE.
Immunogen	Purified SIRL-1-hlg fusion protein in PBS
Aliases	V-set and transmembrane domain-containing protein 1, Signal inhibitory receptor on leukocytes-1
References	1. Steevens, T et al; Signal Inhibitory Immune Receptor on Leukocytes Is a Novel Functional Inhibitory Immune Receptor Expressed on Human Pagocytes. J Immunol 2010, 184
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
28/12/2020

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