

CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	GILT, Human, clone MaP.IP30		
Catalog number	HM2284-20UG		
Lot number	-	Expiry date	-
Volume	200 µl	Amount	20 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA+0.02%NaN3	Concentration	100 µg/ml
Host Species	Mouse IgG1	Conjugate	None
Endotoxin	N.A.	Purification	Protein G
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #			1	3,5			1,2,4	
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 MaP.IP30 stains the intra and extracellular domain of GILT. For intracellular staining U937 cells were permeabilized with buffer containing 0.05% saponin. The cells were fixed in 3.7% formaldehyde before staining. The typical starting working dilution is 2µg/250000 cells.

General Information

Description	Antibodies derived from clone MAP.IP30 recognize human gamma-interferon-inducible lysosomal thiol reductase (GILT). GILT facilitates major histocompatibility complex (MHC) class II-restricted processing through reduction of protein disulfide bonds in the endocytic pathway. GILT can also facilitate the transfer of disulfide-containing antigens into the cytosol, enhancing their cross-presentation by MHC class I. Human GILT consists of 261 amino acids with a 37 amino acid signal sequence and a 224 amino acid precursor form. In general, the 35 kDa precursor is tagged with mannose-6- phosphate (M6P) residues and transported to the endocytic pathway via the M6P receptor (M6PR). A small fraction of the precursor is secreted as a disulfide-linked dimer. In early endosomes, N- and C-terminal pro-peptides are cleaved to generate a 28 kDa mature form. The mature form of GILT is localized to late endosomes and lysosomes and has maximal reductase activity at the acidic pH found in these compartments. GILT is constitutively expressed in professional antigen presenting cells (APC). The constitutive expression of GILT in APCs is likely to account for enhanced reduction of proteins in the late endosomal, lysosomal, and phagosomal compartments. A combination of GILT-mediated reduction and proteolysis in the these compartments can enhance the generation of class II epitopes as well as facilitate the translocation of internalized antigens into the cytosol for proteosomal processing and cross-presentation. The protein is also constitutively expressed in thymocytes, mature T cells, and some fibroblasts. IFN-g plays is the key factor in inducing expression of MHC class II and other components of the class II-restricted processing pathway. IFN-g signals through a specific cell surface receptor followed by activation of JAK/STAT1 signalling.
Immunogen	Partial purified IP30 (purified from human B-LCL).
Aliases	Lfi30, Interferon-gamma-inducible lysosomal reductase.
References	<ol style="list-style-type: none"> Arunachalam, B et al; Intracellular formation and cell surface expression of a complex of an intact lysosomal protein and MHC class II molecules. J Immunol 1998, 160: 5797 Lackman, R et al; Exposure of the promonocytic cell line THP-1 to Escherichia coli induces IFN-gamma-inducible lysosomal thiol reductase expression by inflammatory cytokines. J Immunol 2006, 177: 4833. Hastings, K et al; Functional requirements for the lysosomal thiol reductase GILT in MHC class II-restricted antigen processing. J Immunol 2006, 177: 8569 Lackman, R et al; Innate immune recognition triggers secretion of lysosomal enzymes by macrophages. Traffic 2007, 8: 1179 Taraszka Hastings, K et al ; Functional requirements for the lysosomal thiol reductase GILT in MHC Class II-Restricted Antigen Processing. Journal of immunology 2006, 177: 8569

6. Uyen, T et al; Role of the C-terminal propeptide in the activity and maturation of γ -interferon-inducible lysosomal thiolreductase (GILT). PNAS 2002, 99: 12298

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
09/12/2020

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