

# GILT (T-18): sc-21827

## BACKGROUND

Proteins internalized into the endocytic pathway are usually degraded. Efficient proteolysis requires denaturation, induced by acidic conditions within lysosomes, and reduction of inter- and intrachain disulfide bonds. Cytosolic reduction is mediated enzymatically by thioredoxin. In the endocytic pathway, reduction of protein disulfide bonds is important for the generation of MHC class II-peptide complexes. This process is catalyzed by a  $\gamma$ -interferon-inducible thiol reductase (GILT). GILT is synthesized as a precursor, and following delivery to MHC class II-containing compartments (MIICs), is processed to the mature form via cleavage of amino- and carboxy-terminal propeptides. A lysosomal thiol reductase, GILT, is optimally active at low pH and capable of catalyzing disulfide bond reduction both *in vivo* and *in vitro*. GILT is expressed constitutively in antigen-presenting cells and is induced by  $\gamma$ -interferon in other cell types, suggesting a potentially important role in antigen processing. Additionally, T cell recognition of select exogenous and endogenous epitopes is dependent on tumor cell expression of GILT. The absence of GILT in melanomas alters antigen processing and the hierarchy of immunodominant epitope presentation.

## CHROMOSOMAL LOCATION

Genetic locus: IFI30 (human) mapping to 19p13.11; Ifi30 (mouse) mapping to 8 B3.3.

## SOURCE

GILT (T-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GILT of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-21827 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

GILT (T-18) is recommended for detection of precursor and mature chain of GILT of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500, immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GILT siRNA (h): sc-39522, GILT siRNA (m): sc-39523, GILT shRNA Plasmid (h): sc-39522-SH, GILT shRNA Plasmid (m): sc-39523-SH, GILT shRNA (h) Lentiviral Particles: sc-39522-V and GILT shRNA (m) Lentiviral Particles: sc-39523-V.

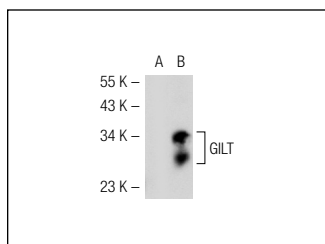
Molecular Weight of GILT: 30 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211 or GILT (m): 293T Lysate: sc-120484.

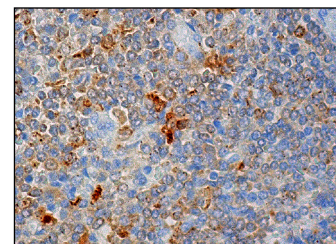
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



GILT (T-18): sc-21827. Western blot analysis of GILT expression in non-transfected: sc-117752 (A) and mouse GILT transfected: sc-120484 (B) 293T whole cell lysates.



GILT (T-18): sc-21827. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of subsets of cells in red and white pulps.

## SELECT PRODUCT CITATIONS

1. Satoh, J., et al. 2007. Human astrocytes express aquaporin-1 and aquaporin-4 *in vitro* and *in vivo*. *Neuropathology* 27: 245-256.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **GILT (G-11): sc-393507**, our highly recommended monoclonal alternative to GILT (T-18).