SANTA CRUZ BIOTECHNOLOGY, INC.

# MAL (T-18): sc-46171

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

MAL (for myelin and lymphocyte protein), also known as T lymphocyte maturation-associated protein, is a nonglycosylated hydrophobic integral membrane protein belonging to the MAL family of proteolipids. MAL is highly enriched in nervous system myelin and in rafts and apical membranes of epithelial cells. It is involved in forming, stabilizing and maintaining glycosphingolipid-enriched membrane microdomains. MAL maintains the myelin sheath and, by controlling the sorting and trafficking of oligodendrocytes, it is involved in central nervous system paranode maintenance. MAL is a component of lipid rafts in myelinating cells. Association with glycosphingolipids may result in protein-lipid microdomain formation in myelin. MAL has been localized to the endoplasmic reticulum of T cells and in compact myelin of cells in the nervous system. MAL is primarily expressed by oligodendrocytes and Schwann cells in the intermediate and late stages of T cell differentiation.

## REFERENCES


1. Schaeren-Wiemers, N., et al. 1995. Identification of new oligodendrocyte- and Myelin-specific genes by a differential screening approach. J. Neurochem. 65: 10-22.
2. Schaeren-Wiemers, N., et al. 2004. The raft-associated protein MAL is required for maintenance of proper axon-glia interactions in the central nervous system. J. Cell Biol. 166: 731-742.
3. Saravanan, K., et al. 2004. Specific downregulation and mistargeting of the lipid raft-associated protein MAL in a glycolipid storage disorder. Neurobiol. Dis. 16: 396-406.
4. Marazuela, M., et al. 2004. Expression of MAL and MAL2, two elements of the protein machinery for raft-mediated transport, in normal and neoplastic human tissue. Histol. Histopathol. 19: 925-933.
5. Philippar, U., et al. 2004. The SRF target gene FHL-2 antagonizes RhoA/MAL-dependent activation of SRF. Mol. Cell 16: 867-880.
6. SWISS-PROT/TrEMBL (P21145). World Wide Web URL: http://www.expasy.ch/sprot/sprot-top.html.


## CHROMOSOMAL LOCATION

Genetic locus: MAL (human) mapping to 2cen-q13; Mal (mouse) mapping to 2 F1.

## SOURCE

MAL (T-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal cytoplasmic domain of MAL of human origin.

## STORAGE

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

## PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-46171 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

MAL (T-18) is recommended for detection of MAL of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with SREBP-1 of mouse and rat origin.

Suitable for use as control antibody for MAL siRNA (h): sc-44785 and MAL siRNA (m): sc-44786; and as shRNA Plasmid control antibody for MAL shRNA Plasmid (h): sc-44785-SH and MAL shRNA Plasmid (m): sc-44786-SH.

Molecular Weight of MAL: 17 kDa.

Positive Controls: Schwann cells.

## 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) 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.

## RESEARCH USE

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