

# MAL2 (T-17): sc-87994



The Power to Question

## BACKGROUND

The MARVEL domain is a 130 amino acid motif that contains four transmembrane helices, both of which have cytoplasmic N- and C-terminal regions. MARVEL domain-containing proteins are thought to participate in tight junction regulation, the biogenesis of vesicular transport carriers and in cholesterol-rich membrane apposition events. MAL2 (MAL, T cell differentiation protein 2) is a 176 amino acid multi-pass membrane protein that is associated with lipid rafts and contains one MARVEL domain. Expressed predominately in liver, kidney and lung, MAL2 functions as a member of the polarized machinery transport system and is required for transcytosis, a transporter pathway used to deliver membrane-bound cargo from perinuclear endosomes to the apical surface in a raft-dependent manner. Differential expression of MAL2 is associated with several cancers, including renal cell carcinoma and childhood leukemia, suggesting a role for MAL2 in tumorigenesis.

## REFERENCES

1. Wilson, S.H., et al. 2001. Identification of MAL2, a novel member of the mal proteolipid family, though interactions with TPD52-like proteins in the yeast two-hybrid system. *Genomics* 76: 81-88.
2. de Marco, M.C., et al. 2002. MAL2, a novel raft protein of the MAL family, is an essential component of the machinery for transcytosis in hepatoma Hep G2 cells. *J. Cell Biol.* 159: 37-44.
3. Marazuela, M., et al. 2004. Expression and distribution of MAL2, an essential element of the machinery for basolateral-to-apical transcytosis, in human thyroid epithelial cells. *Endocrinology* 145: 1011-1016.
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. Llorente, A., et al. 2004. Caveolin-1 and MAL are located on prostasomes secreted by the prostate cancer PC-3 cell line. *J. Cell. Sci.* 117 (Pt. 22): 5343-5351.
6. Marazuela, M., et al. 2004. Expression of MAL2, an integral protein component of the machinery for basolateral-to-apical transcytosis, in human epithelia. *J. Histochem. Cytochem.* 52: 243-252.
7. Rohan, S., et al. 2006. Gene expression profiling separates chromophobe renal cell carcinoma from oncocytoma and identifies vesicular transport and cell junction proteins as differentially expressed genes. *Clin. Cancer Res.* 12: 6937-6945.
8. Barbaric, D., et al. 2006. Expression of tumor protein D52-like genes in childhood leukemia at diagnosis: clinical and sample considerations. *Leuk. Res.* 30: 1355-1363.
9. de Marco, M.C., et al. 2006. Dynamics of MAL2 during glycosylphosphatidylinositol-anchored protein transcytotic transport to the apical surface of hepatoma Hep G2 cells. *Traffic* 7: 61-73.

## STORAGE

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

## CHROMOSOMAL LOCATION

Genetic locus: MAL2 (human) mapping to 8q24.12.

## SOURCE

MAL2 (T-17) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of MAL2 of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-87994 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

MAL2 (T-17) is recommended for detection of MAL2 of 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).

Suitable for use as control antibody for MAL2 siRNA (h): sc-77560, MAL2 shRNA Plasmid (h): sc-77560-SH and MAL2 shRNA (h) Lentiviral Particles: sc-77560-V.

Molecular Weight of MAL2: 19 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## 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.