

# TMEM9 (A-12): sc-160108

## BACKGROUND

TMEM9 (transmembrane protein 9), also known as DERP4 (dermal papilla-derived protein 4), is a 183 amino acid single-pass type I membrane protein that localizes to both the lysosomal membrane and the late endosome membrane. Expressed at high levels in testis, ovary, adrenal gland and prostate, and present at lower levels in stomach, spleen, trachea and colon, TMEM9 exists as a dimer that is thought to play a role in intracellular protein transport and may be post-translationally glycosylated. The gene encoding TMEM9 maps to human chromosome 1 and may be involved in hepatocarcinogenesis. Chromosome 1 houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome. Aberrations in chromosome 1 are found in a variety of cancers, including head and neck cancer, malignant melanoma and multiple myeloma.

## REFERENCES

1. Kveine, M., et al. 2002. Characterization of the novel human transmembrane protein 9 (TMEM9) that localizes to lysosomes and late endosomes. *Biochem. Biophys. Res. Commun.* 297: 912-917.
2. Bonifacino, J.S. and Traub, L.M. 2003. Signals for sorting of transmembrane proteins to endosomes and lysosomes. *Annu. Rev. Biochem.* 72: 395-447.
3. Kurokawa, Y., et al. 2004. PCR-array gene expression profiling of hepatocellular carcinoma. *J. Exp. Clin. Cancer Res.* 23: 135-141.
4. Weise, A., et al. 2005. New insights into the evolution of chromosome 1. *Cytogenet. Genome Res.* 108: 217-222.
5. Marzin, Y., et al. 2006. Chromosome 1 abnormalities in multiple myeloma. *Anticancer Res.* 26: 953-959.
6. Dodeller, F., et al. 2008. The lysosomal transmembrane protein 9B regulates the activity of inflammatory signaling pathways. *J. Biol. Chem.* 283: 21487-21494.

## CHROMOSOMAL LOCATION

Genetic locus: TMEM9 (human) mapping to 1q32.1; Tmem9 (mouse) mapping to 1 E4.

## SOURCE

TMEM9 (A-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of TMEM9 of human origin.

## 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-160108 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

TMEM9 (A-12) is recommended for detection of TMEM9 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); non cross-reactive with other TMEM family members.

TMEM9 (A-12) is also recommended for detection of TMEM9 in additional species, including equine, canine, porcine and avian.

Suitable for use as control antibody for TMEM9 siRNA (h): sc-78932, TMEM9 siRNA (m): sc-154510, TMEM9 shRNA Plasmid (h): sc-78932-SH, TMEM9 shRNA Plasmid (m): sc-154510-SH, TMEM9 shRNA (h) Lentiviral Particles: sc-78932-V and TMEM9 shRNA (m) Lentiviral Particles: sc-154510-V.

Molecular Weight of TMEM9: 26 kDa.

## 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.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.