



TMC8 (S-13): sc-109091

BACKGROUND

Transmembrane channel-like protein 8 (TMC8), also known as Epidermodysplasia verruciformis protein 2 (EVER2), is a 726 amino acid member of the TMC family of proteins. Localized to the endoplasmic reticulum membrane, TMC8 is thought to form a transmembrane channel-like protein with eight predicted transmembrane domains and three leucine zipper motifs. Mutations in the genes encoding TMC8 and TMC6, another member of the TMC family, have been shown to cause epidermodysplasia verruciformis (EV), an autosomal recessive dermatosis characterized by abnormal susceptibility to human papillomaviruses (HPVs) and a high rate of progression to squamous cell carcinoma on sun-exposed skin. Infection by HPVs lead to persistent wart-like or macular lesions. TMC8 is expressed in placenta, prostate and testis, and three named isoforms exist as a result of alternative splicing events.

REFERENCES

1. Ramoz, N., Rueda, L.A., Bouadjar, B., Montoya, L.S., Orth, G. and Favre, M. 2002. Mutations in two adjacent novel genes are associated with epidermodysplasia verruciformis. *Nat. Genet.* 32: 579-581.
2. Keresztes, G., Mutai, H. and Heller, S. 2003. TMC and EVER genes belong to a larger novel family, the TMC gene family encoding transmembrane proteins. *BMC Genomics* 4: 24.
3. Kurima, K., Yang, Y., Sorber, K. and Griffith, A.J. 2003. Characterization of the transmembrane channel-like (TMC) gene family: functional clues from hearing loss and epidermodysplasia verruciformis. *Genomics* 82: 300-308.
4. Azzimonti, B., Mondini, M., De Andrea, M., Gioia, D., Dianzani, U., Mesturini, R., Leigh, G., Tiberio, R., Landolfo, S. and Gariglio, M. 2005. CD8⁺ T-cell lymphocytopenia and lack of EVER mutations in a patient with clinically and virologically typical epidermodysplasia verruciformis. *Arch. Dermatol.* 141: 1323-1325.
5. Sun, X.K., Chen, J.F. and Xu, A.E. 2005. A homozygous nonsense mutation in the EVER2 gene leads to epidermodysplasia verruciformis. *Clin. Exp. Dermatol.* 30: 573-574.
6. Orth, G. 2006. Genetics of epidermodysplasia verruciformis: Insights into host defense against papillomaviruses. *Semin. Immunol.* 18: 362-374.
7. Orth, G. 2008. Host defenses against human papillomaviruses: lessons from epidermodysplasia verruciformis. *Curr. Top. Microbiol. Immunol.* 321: 59-83.
8. Patel, A.S., Karagas, M.R., Pawlita, M., Waterboer, T. and Nelson, H.H. 2008. Cutaneous human papillomavirus infection, the EVER2 gene and incidence of squamous cell carcinoma: a case-control study. *Int. J. Cancer* 122: 2377-2379. 2
9. Hohenstein, E., Rady, P.L., Hergersberg, M., Huber, A.R., Tying, S.K., Bregenzner, T., Streit, M. and Itin, P. 2009. Epidermodysplasia verruciformis in a HIV-positive patient homozygous for the c917A→T polymorphism in the TMC8/EVER2 gene. *Dermatology* 218: 114-118.

CHROMOSOMAL LOCATION

Genetic locus: Tmc8 (mouse) mapping to 11 E2.

SOURCE

TMC8 (S-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal cytoplasmic domain of TMC8 of mouse 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-109091 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TMC8 (S-13) is recommended for detection of TMC8 of mouse and rat 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 TMC8 siRNA (m): sc-154320, TMC8 shRNA Plasmid (m): sc-154320-SH and TMC8 shRNA (m) Lentiviral Particles: sc-154320-V.

Molecular Weight (predicted) of TMC8: 82 kDa.

Molecular Weight (observed) of TMC8: 119 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.

RESEARCH USE

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

PROTOCOLS

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