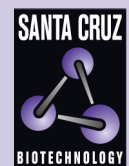


# TMEM43 (E-1): sc-365298



The Power to Question

## BACKGROUND

TMEM43 (transmembrane protein 43), also known as LUMA, ARVC5 or ARVD5, is a 400 amino acid multi-pass membrane protein that localizes to the inner nuclear membrane, as well as to the endoplasmic reticulum. Highly expressed in placenta and present at lower levels in ovary, heart, thymus, spleen, prostate, testis and small intestine, TMEM43 is required for retaining emerin at the nuclear membrane and may also play an important role in the maintenance of nuclear envelope structure. Defects in the gene encoding TMEM43 are the cause of familial arrhythmogenic right ventricular dysplasia type 5 (ARVD5), an inherited disorder that is characterized by heart failure, ventricular tachycardia, fibrofatty replacement of cardiomyocytes and sudden cardiac death.

## REFERENCES

- Ahmad, F., et al. 1998. Localization of a gene responsible for arrhythmogenic right ventricular dysplasia to chromosome 3p23. *Circulation* 98: 2791-2795.
- Norman, M.W., et al. 1999. Arrhythmogenic right ventricular cardiomyopathy: perspectives on disease. *Z. Kardiol.* 88: 550-554.

## CHROMOSOMAL LOCATION

Genetic locus: TMEM43 (human) mapping to 3p25.1; Tmem43 (mouse) mapping to 6 D1.

## SOURCE

TMEM43 (E-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 13-37 within an N-terminal extracellular domain of TMEM43 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TMEM43 (E-1) is available conjugated to agarose (sc-365298 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365298 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365298 PE), fluorescein (sc-365298 FITC), Alexa Fluor® 488 (sc-365298 AF488), Alexa Fluor® 546 (sc-365298 AF546), Alexa Fluor® 594 (sc-365298 AF594) or Alexa Fluor® 647 (sc-365298 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365298 AF680) or Alexa Fluor® 790 (sc-365298 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365298 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## STORAGE

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

## APPLICATIONS

TMEM43 (E-1) is recommended for detection of TMEM43 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 TMEM43 siRNA (h): sc-78426, TMEM43 siRNA (m): sc-77360, TMEM43 shRNA Plasmid (h): sc-78426-SH, TMEM43 shRNA Plasmid (m): sc-77360-SH, TMEM43 shRNA (h) Lentiviral Particles: sc-78426-V and TMEM43 shRNA (m) Lentiviral Particles: sc-77360-V.

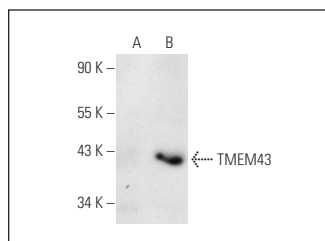
Molecular Weight of TMEM43: 45 kDa.

Positive Controls: TMEM43 (m): 293T Lysate: sc-124169.

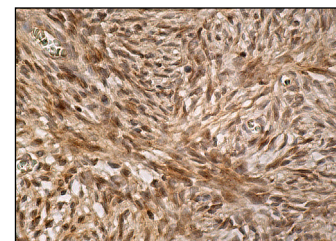
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



TMEM43 (E-1): sc-365298. Western blot analysis of TMEM43 expression in non-transfected: sc-117752 (A) and mouse TMEM43 transfected: sc-124169 (B) 293T whole cell lysates.



TMEM43 (E-1): sc-365298. Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovary tissue showing cytoplasmic and nuclear staining of ovarian stroma cells.

## SELECT PRODUCT CITATIONS

- Franke, WW., et al. 2014. Protein LUMA is a cytoplasmic plaque constituent of various epithelial adherens junctions and composite junctions of myocardial intercalated disks: a unifying finding for cell biology and cardiology. *Cell Tissue Res.* 357: 159-172.

## RESEARCH USE

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