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TMEM43 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12618c

Product Information

Application	WB, IHC-P, E
Primary Accession	Q9BTV4
Other Accession	Q5XIP9, Q9DBS1, NP_077310.1
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB32139
Calculated MW	44876
Antigen Region	195-223

Additional Information

Gene ID	79188
Other Names	Transmembrane protein 43, Protein LUMA, TMEM43
Target/Specificity	This TMEM43 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 195-223 amino acids from the Central region of human TMEM43.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	TMEM43 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TMEM43
Function	May have an important role in maintaining nuclear envelope structure by organizing protein complexes at the inner nuclear membrane. Required for retaining emerin at the inner nuclear membrane (By similarity). Plays a role in

	the modulation of innate immune signaling through the cGAS-STING pathway by interacting with RNF26 (PubMed:32614325). In addition, functions as a critical signaling component in mediating NF-kappa-B activation by acting downstream of EGFR and upstream of CARD10 (PubMed:27991920). Contributes to passive conductance current in cochlear glia-like supporting cells, mediated by gap junctions and necessary for hearing and speech discrimination (PubMed:34050020).
Cellular Location	Endoplasmic reticulum membrane. Nucleus inner membrane; Multi-pass membrane protein. Cell membrane Note=Retained in the inner nuclear membrane through interaction with EMD and A- and B-lamins. The N- and C-termini are oriented towards the nucleoplasm. The majority of the hydrophilic domain resides in the endoplasmic reticulum lumen (By similarity).
Tissue Location	Highest expression in placenta. Also found at lower levels in heart, ovary, spleen, small intestine, thymus, prostate and testis.

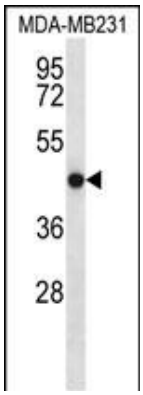
Background

This gene belongs to the TMEM43 family. Defects in this gene are the cause of familial arrhythmogenic right ventricular dysplasia type 5 (ARVD5), also known as arrhythmogenic right ventricular cardiomyopathy type 5 (ARVC5). Arrhythmogenic right ventricular dysplasia is an inherited disorder, often involving both ventricles, and is characterized by ventricular tachycardia, heart failure, sudden cardiac death, and fibrofatty replacement of cardiomyocytes. This gene contains a response element for PPAR gamma (an adipogenic transcription factor), which may explain the fibrofatty replacement of the myocardium, a characteristic pathological finding in ARVC.

References

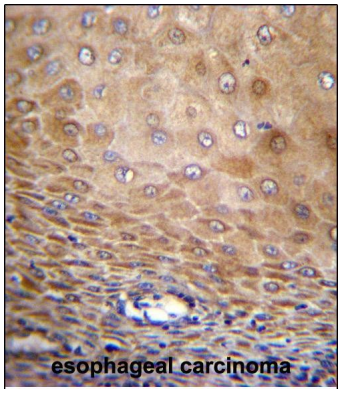
Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :
Barahona-Dussault, C., et al. Clin. Genet. 77(1):37-48(2010)
Hodgkinson, K., et al. Genet. Med. 11(12):859-865(2009)
Merner, N.D., et al. Am. J. Hum. Genet. 82(4):809-821(2008)
Bengtsson, L., et al. J. Cell. Sci. 121 (PT 4), 536-548 (2008) :

Images



TMEM43 Antibody (Center) (Cat. #AP12618c) western blot analysis in MDA-MB231 cell line lysates (35ug/lane).This demonstrates the TMEM43 antibody detected the TMEM43 protein (arrow).

TMEM43 Antibody (Center) (Cat. #AP12618c)immunohistochemistry analysis in formalin fixed and paraffin embedded human esophageal carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining.This data



demonstrates the use of TMEM43 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.