SANTA CRUZ BIOTECHNOLOGY, INC.

TMEM111 (A-12): sc-365903

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

TMEM111, also known as POB is a 261 amino acid multi-pass membrane protein that exists as multiple alternatively spliced isoforms which are encoded by a gene that maps to human chromosome 3p25.3. Chromosome 3 is made up of about 214 million bases encoding over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci. Key tumor suppressing genes on chromosome 3 include those that encode the apoptosis mediator RASSF1, the cell migration regulator HYAL1 and the angiogenesis suppressor SEMA3B. Marfan syndrome, porphyria, von Hippel-Lindau syndrome, osteogenesis imperfecta and Charcot-Marie-Tooth disease are a few of the numerous genetic diseases associated with chromosome 3.

REFERENCE

1. Müller, S., et al. 2000. Molecular cytogenetic dissection of human chromosomes 3 and 21 evolution. Proc. Natl. Acad. Sci. USA 97: 206-211.
2. Braga, E.A., et al. 2003. New tumor suppressor genes in hot spots of human chromosome 3: new methods of identification. Mol. Biol. 37: 194-211.

CHROMOSOMAL LOCATION

Genetic locus: EMC3 (human) mapping to 3p25.3; Emc3 (mouse) mapping to 6 E3.

SOURCE

TMEM111 (A-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 51-83 within an internal region of TMEM111 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TMEM111 (A-12) is available conjugated to agarose (sc-365903 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365903 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365903 PE), fluorescein (sc-365903 FITC), Alexa Fluor® 488 (sc-365903 AF488), Alexa Fluor® 546 (sc-365903 AF546), Alexa Fluor® 594 (sc-365903 AF594) or Alexa Fluor® 647 (sc-365903 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365903 AF680) or Alexa Fluor® 790 (sc-365903 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365903 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

TMEM111 (A-12) is recommended for detection of TMEM111 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

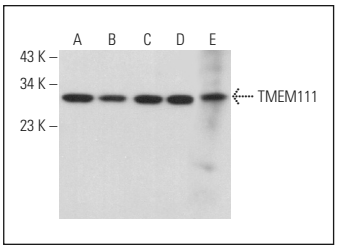
TMEM111 (A-12) is also recommended for detection of TMEM111 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for TMEM111 siRNA (h): sc-77987, TMEM111 siRNA (m): sc-154350, TMEM111 shRNA Plasmid (h): sc-77987-SH, TMEM111 shRNA Plasmid (m): sc-154350-SH, TMEM111 shRNA (h) Lentiviral Particles: sc-77987-V and TMEM111 shRNA (m) Lentiviral Particles: sc-154350-V.

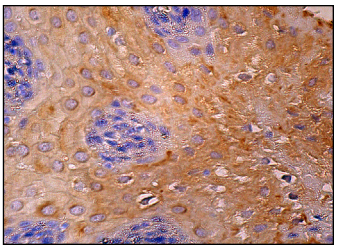
Molecular Weight of TMEM111: 30 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, 3T3-L1 cell lysate: sc-2243 or BC_3H1 cell lysate: sc-2299.

DATA



TMEM111 (A-12): sc-365903. Western blot analysis of TMEM111 expression in NIH/3T3 (**A**), C3H/10T1/2 (**B**), 3T3-L1 (**C**) and BC_3H1 (**D**) whole cell lysates and rat heart tissue extract (**E**).



TMEM111 (A-12): sc-365903. Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing cytoplasmic staining of squamous epithelial cells.

SELECT PRODUCT CITATIONS

1. Tang, X., et al. 2017. EMC3 coordinates surfactant protein and lipid homeostasis required for respiration. J. Clin. Invest. 127: 4314-4325.
2. Zhao, C., et al. 2020. CRISPR screening of porcine sgRNA library identifies host factors associated with Japanese encephalitis virus replication. Nat. Commun. 11: 5178.
3. Gaspar, C.J., .et al. 2022. EMC is required for biogenesis of Xport-A, an essential chaperone of Rhodopsin-1 and the TRP channel. EMBO Rep. 23: e53210.
4. Badenes, M., et al. 2023. The ADAM17 sheddase complex regulator iTAP/Frmd8 modulates inflammation and tumor growth. Life Sci. Alliance 6: e202201644.

RESEARCH USE

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