

FRMD3 (A-14): sc-164431

BACKGROUND

FERM domains are roughly 150 amino acids in length and are found in a number of cytoskeletal-associated proteins such as ezrin, radixin, moesin and 4.1 (erythrocyte membrane protein band 4.1), where they provide a link between cytoskeletal signals and membrane dynamics. FRMD3 (FERM domain-containing protein 3), also known as band 4.1-like protein 40 or 4.10 (ovary type protein 4.1), is a 597 amino acid single-pass membrane protein that contains one FERM domain. Gene transcription of FRMD3 is ovary-specific. Expression of FRMD3 can be found in kidney, lung and skeletal muscle, with lower levels in thymus and brain. FRMD3 is a novel putative tumor suppressor gene that likely has an important role in the development and progression of lung cancer. The gene encoding FRMD, which maps to human chromosome 9q21.32, may also be involved in susceptibility to diabetic nephropathy. FRMD3 exists as five alternatively spliced isoforms.

REFERENCES

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- Humphray, S.J., et al. 2004. DNA sequence and analysis of human chromosome 9. *Nature* 429: 369-374.
- Sweetser, D.A., et al. 2005. Delineation of the minimal commonly deleted segment and identification of candidate tumor-suppressor genes in del(9q) acute myeloid leukemia. *Genes Chromosomes Cancer* 44: 279-291.
- Haase, D., et al. 2007. FRMD3, a novel putative tumour suppressor in NSCLC. *Oncogene* 26: 4464-4468.
- Pezzolesi, M.G., et al. 2009. Genome-wide association scan for diabetic nephropathy susceptibility genes in type 1 diabetes. *Diabetes* 58: 1403-1410.
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- Mooyaart, A.L., et al. 2011. Genetic associations in diabetic nephropathy: a meta-analysis. *Diabetologia* 54: 544-553.

CHROMOSOMAL LOCATION

Genetic locus: FRMD3 (human) mapping to 9q21.32; Frmd3 (mouse) mapping to 4 C3.

SOURCE

FRMD3 (A-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of FRMD3 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-164431 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FRMD3 (A-14) is recommended for detection of FRMD3 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 FRMD family members.

FRMD3 (A-14) is also recommended for detection of FRMD3 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for FRMD3 siRNA (h): sc-92528, FRMD3 siRNA (m): sc-145240, FRMD3 shRNA Plasmid (h): sc-92528-SH, FRMD3 shRNA Plasmid (m): sc-145240-SH, FRMD3 shRNA (h) Lentiviral Particles: sc-92528-V and FRMD3 shRNA (m) Lentiviral Particles: sc-145240-V.

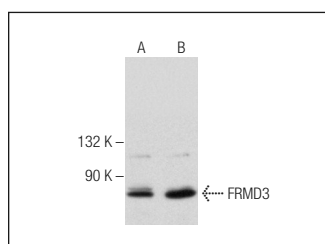
Molecular Weight of FRMD3 isoforms: 69/64/41/24 kDa.

Positive Controls: FRMD3 (h): 293T lysate: sc-114564, SK-OV-3 whole cell lysate or ES-2 cell lysate: sc-24674.

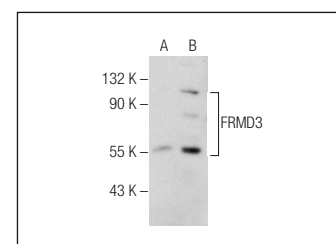
RECOMMENDED SECONDARY REAGENTS

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.

DATA



FRMD3 (A-14): sc-164431. Western blot analysis of FRMD3 expression in SK-OV-3 (A) and SHP-77 (B) whole cell lysates.



FRMD3 (A-14): sc-164431. Western blot analysis of FRMD3 expression in non-transfected: sc-117752 (A) and human FRMD3 transfected: sc-114564 (B) 293T whole cell lysates.

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.