SANTA CRUZ BIOTECHNOLOGY, INC.

FREM2 (F-1): sc-376555

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

FREM2 (FRAS1 related extracellular matrix protein 2) is a 3,169 amino acid single-pass type I membrane protein that localizes to the extracellular side of the cell membrane and contains 5 Calx-β domains, as well as 12 CSPG repeats. Functioning as an extracellular matrix protein, FREM2 is required for the maintenance of skin and renal epithelia and is also thought to be involved in epidermal adhesion events. Defects or mutations in the gene encoding FREM2, which maps to human chromsome 13, are associated with Fraser syndrome, a multisystem malformation that is characterized by ear abnormalities, congenital heart defects and cutaneous syndactyly. FREM2 exists as multiple alternatively spliced isoforms.

CHROMOSOMAL LOCATION

Genetic locus: FREM2 (human) mapping to 13q13.3; Frem2 (mouse) mapping to 3 C.

SOURCE

FREM2 (F-1) is a mouse monoclonal antibody raised against amino acids 2281-2580 mapping within an internal region of FREM2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

FREM2 (F-1) is available conjugated to agarose (sc-376555 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376555 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376555 PE), fluorescein (sc-376555 FITC), Alexa Fluor® 488 (sc-376555 AF488), Alexa Fluor® 546 (sc-376555 AF546), Alexa Fluor® 594 (sc-376555 AF594) or Alexa Fluor® 647 (sc-376555 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376555 AF680) or Alexa Fluor® 790 (sc-376555 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, FREM2 (F-1) is available conjugated to biotin (sc-376555 B), 200 µg/ml, for WB, IHC(P) and ELISA.

APPLICATIONS

FREM2 (F-1) is recommended for detection of FREM2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for FREM2 siRNA (h): sc-75061, FREM2 siRNA (m): sc-75062, FREM2 shRNA Plasmid (h): sc-75061-SH, FREM2 shRNA Plasmid (m): sc-75062-SH, FREM2 shRNA (h) Lentiviral Particles: sc-75061-V and FREM2 shRNA (m) Lentiviral Particles: sc-75062-V.

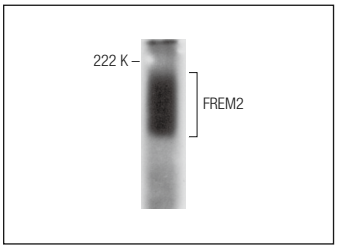
Molecular Weight of FREM2: 220 kDa.

Positive Controls: ACHN whole cell lysate: sc-364365, C2C12 whole cell lysate: sc-364188 or NIH/3T3 whole cell lysate: sc-2210.

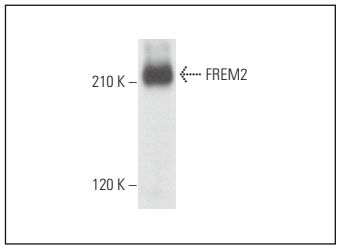
RECOMMENDED SUPPORT REAGENTS

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.

DATA



FREM2 (F-1): sc-376555. Western blot analysis of FREM2 expression in C2C12 whole cell lysate.



FREM2 (F-1): sc-376555. Western blot analysis of FREM2 expression in ACHN whole cell lysate.

SELECT PRODUCT CITATIONS

1. Takahashi, T., et al. 2016. Mesenchymal expression of the FRAS1/FREM2 gene unit is decreased in the developing fetal diaphragm of nitrofen-induced congenital diaphragmatic hernia. Pediatr. Surg. Int. 32: 135-140.
2. Yu, Q., et al. 2018. A homozygous mutation p.Arg2167Trp in FREM2 causes isolated cryptophthalmos. Hum. Mol. Genet. 27: 2357-2366.
3. Zhang, X., et al. 2019. Loss-of-function mutations in FREM2 disrupt eye morphogenesis. Exp. Eye Res. 181: 302-312.
4. Lipp, S.N., et al. 2023. FOXD1 is required for 3d patterning of the kidney interstitial matrix. Dev. Dyn. 252: 463-482.

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 for detailed protocols and support products.