SANTA CRUZ BIOTECHNOLOGY, INC.

FAHD2A (H-11): sc-515367

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

FAHD2A (fumarylacetoacetate hydrolase domain containing 2A), also known as CGI-105, is a 314 amino acid protein that likely possesses hydrolase activity and belongs to the FAH family. Calcium and magnesium are presumed to be cofactors for FAHD2A. FAHD2A is encoded by a gene located on human chromosome 2, which consists of 237 million bases, encodes over 1,400 genes and makes up approximately 8% of the human genome. A number of genetic diseases are linked to genes on chromosome 2. Harlequin icthyosis, a rare and morbid skin deformity, is associated with mutations in the ABCA12 gene. The lipid metabolic disorder sitosterole-mia is associated with ABCG5 and ABCG8. An extremely rare recessive genetic disorder, Alström syndrome is due to mutations in the ALMS1 gene. Interestingly, chromosome 2 contains what appears to be a vestigial second centromere and vestigial telomeres which gives credence to the hypothesis that human chromosome 2 is the result of an ancient fusion of two ancestral chromosomes seen in modern form today in apes.

REFERENCES

1. Baldini, A., et al. 1993. An alphoid DNA sequence conserved in all human and great ape chromosomes: evidence for ancient centromeric sequences at human chromosomal regions 2q21 and 9q13. Hum. Genet. 90: 577-583.
2. Patel, S.B., et al. 1998. Mapping a gene involved in regulating dietary cholesterol absorption. The sitosterolemia locus is found at chromosome 2p21. J. Clin. Invest. 102: 1041-1044.
3. Shulenin, S., et al. 2001. An ATP-binding cassette gene (ABCG5) from the ABCG (white) gene subfamily maps to human chromosome 2p21 in the region of the *Sitosterolemia locus*. Cytogenet. Cell Genet. 92: 204-208.
4. Hearn, T., et al. 2002. Mutation of ALMS1, a large gene with a tandem repeat encoding 47 amino acids, causes Alström syndrome. Nat. Genet. 31: 79-83.
5. Manjasetty, B.A., et al. 2004. X-ray structure of fumarylacetoacetate hydrolase family member *Homo sapiens* FLJ36880. Biol. Chem. 385: 935-942.
6. Kelsell, D.P., et al. 2005. Mutations in ABCA12 underlie the severe congenital skin disease harlequin ichthyosis. Am. J. Hum. Genet. 76: 794-803.
7. Horvath, J.E., et al. 2005. Punctuated duplication seeding events during the evolution of human chromosome 2p11. Genome Res. 15: 914-927.

CHROMOSOMAL LOCATION

Genetic locus: FAHD2A (human) mapping to 2q11.1; Fahd2a (mouse) mapping to 2 F1.

SOURCE

FAHD2A (H-11) is a mouse monoclonal antibody raised against amino acids 160-279 mapping within an internal region of FAHD2A of human origin.

PRODUCT

Each vial contains 200 µg IgG_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

FAHD2A (H-11) is recommended for detection of FAHD2A 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 FAHD2A siRNA (h): sc-94729, FAHD2A siRNA (m): sc-145007, FAHD2A shRNA Plasmid (h): sc-94729-SH, FAHD2A shRNA Plasmid (m): sc-145007-SH, FAHD2A shRNA (h) Lentiviral Particles: sc-94729-V and FAHD2A shRNA (m) Lentiviral Particles: sc-145007-V.

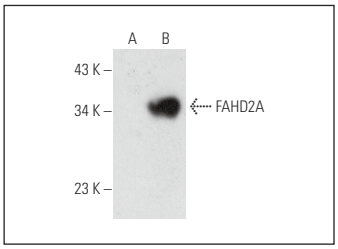
Molecular Weight of FAHD2A: 35 kDa.

Positive Controls: FAHD2A (m): 293T Lysate: sc-126823.

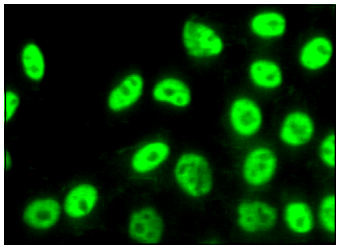
RECOMMENDED SUPPORT REAGENTS

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



FAHD2A (H-11): sc-515367. Western blot analysis of FAHD2A expression in non-transfected: sc-117752 (**A**) and mouse FAHD2A transfected: sc-126823 (**B**) 293T whole cell lysates.



FAHD2A (H-11): sc-515367. Immunofluorescence staining of formalin-fixed HeLa cells showing nuclear localization.

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.