SANTA CRUZ BIOTECHNOLOGY, INC.

CFAP47 (G-12): sc-514714

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The X and Y chromosomes are the human sex chromosomes. Chromosome X consists of about 153 million base pairs and nearly 1,000 genes. The combination of an X and Y chromosome lead to normal male development while two copies of X lead to normal female development. There are a number of conditions related to an unusual number and combinations of sex chromosomes being inherited. More than one copy of the X chromosome with a Y chromosome causes Klinefelter's syndrome. A single copy of X alone leads to Turner's syndrome. More than two copies of the X chromosome, in the absence of a Y chromosome, is known as triple X syndrome. Color blindness, hemophilia and Duchenne muscular dystrophy are well known X chromosome-linked conditions which affect males more frequently as males carry a single X chromosome.

REFERENCES

1. Givens, J.R., et al. 1975. Features of Turner's syndrome in women with polycystic ovaries. Obstet. Gynecol. 45: 619-624.
2. Bernardino-Sgherri, J., et al. 2002. Overall DNA methylation and chromatin structure of normal and abnormal X chromosomes. Cytogenet. Genome Res. 99: 85-91.
3. Ozçelik, T. 2002. Uncovering the complex mysteries of mosaicism. Nature 417: 588.
4. Muntoni, F., et al. 2003. Dystrophin and mutations: one gene, several proteins, multiple phenotypes. Lancet Neurol. 2: 731-740.
5. Deeb, S.S. 2005. The molecular basis of variation in human color vision. Clin. Genet. 67: 369-377.

CHROMOSOMAL LOCATION

Genetic locus: CFAP47 (human) mapping to Xp21.1.

SOURCE

CFAP47 (G-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 557-582 near the C-terminus of CFAP47 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.

CFAP47 (G-12) is available conjugated to agarose (sc-514714 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514714 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514714 PE), fluorescein (sc-514714 FITC), Alexa Fluor® 488 (sc-514714 AF488), Alexa Fluor® 546 (sc-514714 AF546), Alexa Fluor® 594 (sc-514714 AF594) or Alexa Fluor® 647 (sc-514714 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514714 AF680) or Alexa Fluor® 790 (sc-514714 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514714 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

CFAP47 (G-12) is recommended for detection of CFAP47 of 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 CFAP47 siRNA (h): sc-91131, CFAP47 shRNA Plasmid (h): sc-91131-SH and CFAP47 shRNA (h) Lentiviral Particles: sc-91131-V.

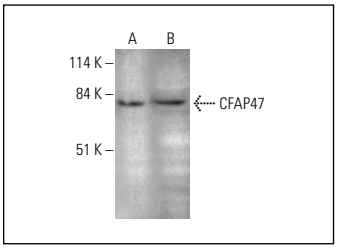
Molecular Weight of CFAP47: 72 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, CCRF-HSB-2 cell lysate: sc-2265 or ALL-SIL whole cell lysate: sc-364356.

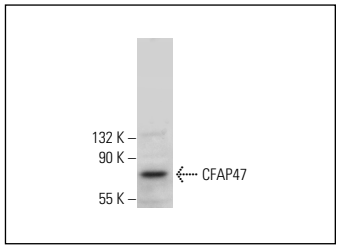
RECOMMENDED SUPPORT REAGENTS

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



CFAP47 (G-12): sc-514714. Western blot analysis of CFAP47 expression in CCRF-HSB-2 (**A**) and ALL-SIL (**B**) whole cell lysates.



CFAP47 (G-12): sc-514714. Western blot analysis of CFAP47 expression in Jurkat whole cell lysate.

SELECT PRODUCT CITATIONS

1. Liu, M., et al. 2023. A novel mutation in CFAP47 causes male infertility due to multiple morphological abnormalities of the sperm flagella. Front. Endocrinol. 14: 1155639.

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.