SANTA CRUZ BIOTECHNOLOGY, INC.

WDPCP (A-5): sc-514151

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

WDPCP, also known as C2orf86, fritz, hFrtz or DKFZp686C12204, is a 746 amino acid protein that contains 2 WD repeats and exists as 3 alternatively spliced isoforms. WDPCP is encoded by a gene located on human chromosome 2p15. The second largest human chromosome, chromosome 2 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 sitosterolemia 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. Ijdo, J.W., et al. 1991. Origin of human chromosome 2: an ancestral telomere-telomere fusion. Proc. Natl. Acad. Sci. USA 88: 9051-9055.
2. Avarello, R., et al. 1992. Evidence for an ancestral alphoid domain on the long arm of human chromosome 2. Hum. Genet. 89: 247-249.
3. Hillier, L.W., et al. 2005. Generation and annotation of the DNA sequences of human chromosomes 2 and 4. Nature 434: 724-731.
4. Thomas, A.C., et al. 2006. ABCA12 is the major harlequin ichthyosis gene. J. Invest. Dermatol. 126: 2408-2413.

CHROMOSOMAL LOCATION

Genetic locus: WDPCP (human) mapping to 2p15; Wdpcp (mouse) mapping to 11 A3.1.

SOURCE

WDPCP (A-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 533-559 within an internal region of WDPCP 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.

WDPCP (A-5) is available conjugated to agarose (sc-514151 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514151 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514151 PE), fluorescein (sc-514151 FITC), Alexa Fluor® 488 (sc-514151 AF488), Alexa Fluor® 546 (sc-514151 AF546), Alexa Fluor® 594 (sc-514151 AF594) or Alexa Fluor® 647 (sc-514151 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514151 AF680) or Alexa Fluor® 790 (sc-514151 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514151 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

WDPCP (A-5) is recommended for detection of WDPCP 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 WDPCP siRNA (h): sc-94783, WDPCP siRNA (m): sc-141399, WDPCP shRNA Plasmid (h): sc-94783-SH, WDPCP shRNA Plasmid (m): sc-141399-SH, WDPCP shRNA (h) Lentiviral Particles: sc-94783-V and WDPCP shRNA (m) Lentiviral Particles: sc-141399-V.

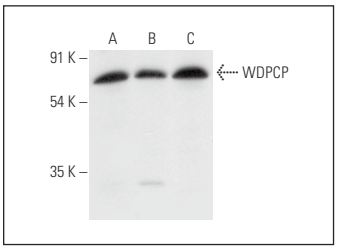
Molecular Weight of WDPCP isoform 1/2/3: 85/71/67 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

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



WDPCP (A-5): sc-514151. Western blot analysis of WDPCP expression in K-562 (**A**), HeLa (**B**) and Jurkat (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Urbanek, M.E., et al. 2021. Genetic predisposition to tinnitus in the UK Biobank population. Sci. Rep. 11: 18150.

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.