

CHCHD5 (G-9): sc-514187

BACKGROUND

CHCHD5 (coiled-coil-helix-coiled-coil-helix domain-containing protein 5) is a 110 amino acid protein that contains one CHCH domain. The gene encoding CHCHD5 maps to human chromosome 2, which consists of 237 million bases encoding over 1,400 genes and making up approximately 8% of the human genome. A number of genetic diseases are linked to genes on chromosome 2. Harlequin ichthyosis, 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.
5. Akiyama, M., et al. 2007. Compound heterozygous ABCA12 mutations including a novel nonsense mutation underlie harlequin ichthyosis. *Dermatology* 215: 155-159.
6. Marshall, J.D., et al. 2007. Alström syndrome. *Eur. J. Hum. Genet.* 15: 1193-1202.

CHROMOSOMAL LOCATION

Genetic locus: CHCHD5 (human) mapping to 2q13; Chchd5 (mouse) mapping to 2 F1.

SOURCE

CHCHD5 (G-9) is a mouse monoclonal antibody raised against amino acids 44-96 mapping within an internal region of CHCHD5 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CHCHD5 (G-9) is available conjugated to agarose (sc-514187 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514187 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514187 PE), fluorescein (sc-514187 FITC), Alexa Fluor® 488 (sc-514187 AF488), Alexa Fluor® 546 (sc-514187 AF546), Alexa Fluor® 594 (sc-514187 AF594) or Alexa Fluor® 647 (sc-514187 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514187 AF680) or Alexa Fluor® 790 (sc-514187 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CHCHD5 (G-9) is recommended for detection of CHCHD5 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 CHCHD5 siRNA (h): sc-94593, CHCHD5 siRNA (m): sc-142317, CHCHD5 shRNA Plasmid (h): sc-94593-SH, CHCHD5 shRNA Plasmid (m): sc-142317-SH, CHCHD5 shRNA (h) Lentiviral Particles: sc-94593-V and CHCHD5 shRNA (m) Lentiviral Particles: sc-142317-V.

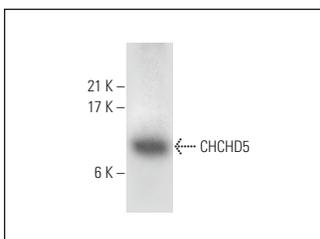
Molecular Weight of CHCHD5: 12 kDa.

Positive Controls: human tonsil tissue extract: sc-364263.

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



CHCHD5 (G-9): sc-514187. Western blot analysis of CHCHD5 expression in human tonsil tissue extract.

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.

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