

CHD1 (C-8): sc-271626

BACKGROUND

Chromodomains participate in the recognition of lysine-methylated histone tails and nucleic acids. The CHD1 (chromodomain-helicase-DNA-binding protein 1) protein is named for its chromodomain, ATPase helicase-like domain and DNA-binding domain. CHD1 functions as an ATP-utilizing chromatin assembly factor. Unlike HP1 and Polycomb proteins that use single chromodomains to bind to their respective methylated Histone H3 tails, the two chromodomains of CHD1 cooperate to associate with one methylated H3 tail. Unique inserts within chromodomain 1 of CHD1 block the expected site of H3 tail binding seen in HP1 and Polycomb, and instead direct H3 binding to a groove at the interchromodomain junction. The human CHD1 gene maps to 5q15 and encodes a 1,709 amino acid deduced protein that shares 95.5% identity with the 1,711 amino acid mouse Chd1 polypeptide.

REFERENCES

1. Stokes, D.G., et al. 1995. DNA-binding and chromatin localization properties of CHD1. *Mol. Cell. Biol.* 15: 2745-2753.
2. Stokes, D.G., et al. 1996. CHD1 is concentrated in interbands and puffed regions of *Drosophila* polytene chromosomes. *Proc. Natl. Acad. Sci. USA* 93: 7137-7142.
3. Fridolfsson, A.K., et al. 2000. Molecular evolution of the avian CHD1 genes on the Z and W sex chromosomes. *Genetics* 155: 1903-1912.

CHROMOSOMAL LOCATION

Genetic locus: CHD1 (human) mapping to 5q15; Chd1 (mouse) mapping to 17 A2.

SOURCE

CHD1 (C-8) is a mouse monoclonal antibody raised against amino acids 1500-1709 mapping at the C-terminus of CHD1 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-271626 X, 200 µg/0.1 ml.

CHD1 (C-8) is available conjugated to agarose (sc-271626 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271626 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271626 PE), fluorescein (sc-271626 FITC), Alexa Fluor® 488 (sc-271626 AF488), Alexa Fluor® 546 (sc-271626 AF546), Alexa Fluor® 594 (sc-271626 AF594) or Alexa Fluor® 647 (sc-271626 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271626 AF680) or Alexa Fluor® 790 (sc-271626 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

CHD1 (C-8) is recommended for detection of CHD1 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 CHD1 siRNA (h): sc-60363, CHD1 siRNA (m): sc-60364, CHD1 shRNA Plasmid (h): sc-60363-SH, CHD1 shRNA Plasmid (m): sc-60364-SH, CHD1 shRNA (h) Lentiviral Particles: sc-60363-V and CHD1 shRNA (m) Lentiviral Particles: sc-60364-V.

CHD1 (C-8) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

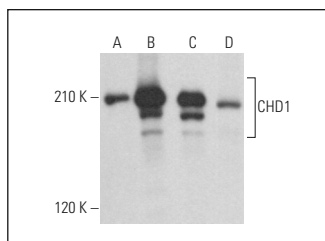
Molecular Weight of CHD1: 200 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, NIH/3T3 whole cell lysate: sc-2210 or Jurkat whole cell lysate: sc-2204.

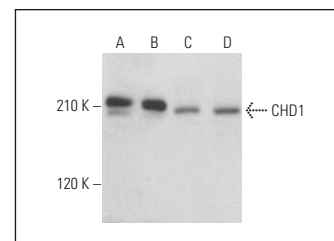
RECOMMENDED SUPPORT REAGENTS

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



CHD1 (C-8): sc-271626. Western blot analysis of CHD1 expression in K-562 (A), Jurkat (B), NIH/3T3 (C) and A-10 (D) whole cell lysates.



CHD1 (C-8): sc-271626. Western blot analysis of CHD1 expression in K-562 (A), HEL 92.1.7 (B), Sol8 (C) and L6 (D) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Burkhardt, L., et al. 2013. CHD1 is a 5q21 tumor suppressor required for ERG rearrangement in prostate cancer. *Cancer Res.* 73: 2795-2805.
2. Oh-Hohenhorst, S.J., et al. 2021. CHD1 loss negatively influences metastasis-free survival in R0-resected prostate cancer patients and promotes spontaneous metastasis *in vivo*. *Cancer Gene Ther.* E-published.

RESEARCH USE

For research use only, not for use in diagnostic procedures.