SANTA CRUZ BIOTECHNOLOGY, INC.

CHD7 (F-11): sc-390742

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Chromodomain-helicase-DNA-binding protein 7 (CHD7) is a 2,997 amino acid member of the SNF2/Rad54 helicase family of proteins and contains two chromo domains, one helicase ATP-binding domain and one helicase C-terminal domain. Highly expressed in both fetal and adult brain, CHD7 is thought to be a potential transcription regulator. Mutations in the gene encoding CHD7 have been shown to cause CHARGE syndrome, a common cause of congenital anomalies, including choanal atresia and malformations of the heart, inner ear and retina. Defects in the CHD7 gene has also been linked to increased susceptibility to idiopathic scoliosis, the most common spinal deformity in children. Two isoforms of CHD7 exist as a result of alternative splicing events.

REFERENCES

1. Ogata, T., et al. 2006. Kallmann syndrome phenotype in a female patient with CHARGE syndrome and CHD7 mutation. Endocr. J. 53: 741-743.
2. Gao, X., et al. 2007. CHD7 gene polymorphisms are associated with susceptibility to idiopathic scoliosis. Am. J. Hum. Genet. 80: 957-965.
3. Udaka, T., et al. 2007. An Alu retrotransposition-mediated deletion of CHD7 in a patient with CHARGE syndrome. Am. J. Med. Genet. A 143A: 721-726.
4. Hurd, E.A., et al. 2007. Loss of CHD7 function in gene-trapped reporter mice is embryonic lethal and associated with severe defects in multiple developing tissues. Mamm. Genome 18: 94-104.
5. Kim, H.G., et al. 2008. Mutations in CHD7, encoding a chromatin-remodeling protein, cause idiopathic hypogonadotropic hypogonadism and Kallmann syndrome. Am. J. Hum. Genet. 83: 511-519.
6. Ellison, J. 2008. Gene symbol: CHD7. Disease: CHARGE syndrome. Hum. Genet. 124: 323.

CHROMOSOMAL LOCATION

Genetic locus: CHD7 (human) mapping to 8q12.1; Chd7 (mouse) mapping to 4 A1.

SOURCE

CHD7 (F-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 450-473 of CHD7 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-390742 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

CHD7 (F-11) is recommended for detection of CHD7 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), immunohistochemistry (including paraffin-embedded sections) (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 CHD7 siRNA (h): sc-72884, CHD7 siRNA (m): sc-72885, CHD7 shRNA Plasmid (h): sc-72884-SH, CHD7 shRNA Plasmid (m): sc-72885-SH, CHD7 shRNA (h) Lentiviral Particles: sc-72884-V and CHD7 shRNA (m) Lentiviral Particles: sc-72885-V.

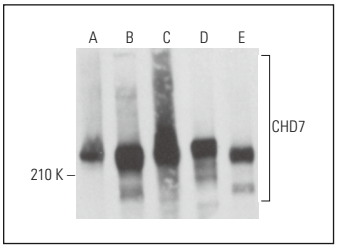
Molecular Weight of CHD7: 336 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, IB4 whole cell lysate: sc-364780 or F9 cell lysate: sc-2245.

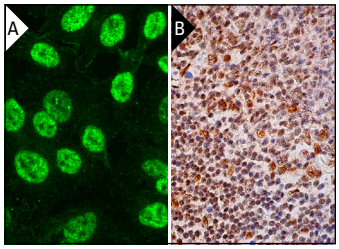
RECOMMENDED SUPPORT REAGENTS

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 L-Agarose: sc-2336 (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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CHD7 (F-11): sc-390742. Western blot analysis of CHD7 expression in rat brain tissue extract (**A**) and F9 (**B**), NIH/3T3 (**C**), RAW 264.7 (**D**) and IB4 (**E**) whole cell lysates.



CHD7 (F-11): sc-390742. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing nuclear staining of cells in germinal center and cells in non-germinal center (**B**).

SELECT PRODUCT CITATIONS

1. Doi, T., et al. 2017. CHD7 collaborates with Sox2 to regulate activation of oligodendrocyte precursor cells after spinal cord injury. J. Neurosci. 37: 10290-10309.

RESEARCH USE

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