



CHD1 (yP-14): sc-31673

BACKGROUND

Transcription in eukaryotes is influenced by the chromatin state of the template, and chromatin remodeling factors have well-documented roles in regulating transcription initiation. The specific post-translational modifications to histones influence many nuclear processes including gene regulation, DNA repair and replication. Chromo-ATPase/helicase-DNA binding domain 1 (CHD1) is a nuclear protein which belongs to the SNF2/RAD54 helicase family. CHD1 exists predominantly as a monomer and functions as an ATP-utilizing chromatin assembly factor. One of the two chromodomains of CHD1 specifically interacts with the methylated Lysine 4 mark on Histone H3 that is associated with transcriptional activity. It is phosphorylated at sites Ser 987 and Ser 989 and is a component of the SAGA and SLIK complex. CHD1 also interacts with splicing proteins mKIAA0164, Srp20, and SAF-B.

REFERENCES

1. Tai, H.H., et al. 2003. CHD1 associates with NCoR and histone deacetylase as well as with RNA splicing proteins. *Biochem. Biophys. Res. Commun.* 308: 170-176.
2. Simic, R., et al. 2003. Chromatin remodeling protein CHD1 interacts with transcription elongation factors and localizes to transcribed genes. *EMBO J.* 22: 1846-1856.
3. Pray-Grant M.G., et al. 2005. CHD1 chromodomain links Histone H3 methylation with SAGA- and SLIK-dependent acetylation. *Nature* 433: 434-438.
4. Lusser A., et al. 2005. Distinct activities of CHD1 and ACF in ATP-dependent chromatin assembly. *Nat. Struct. Mol. Biol.* 12: 160-166.
5. SWISS-PROT/TrEMBL (P32657). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

CHROMOSOMAL LOCATION

Genetic locus: CHD1 (human) mapping to 5q15-q21; Chd1 (mouse) mapping to 17 A2.

SOURCE

CHD1 (yP-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of CHD1 of *Saccharomyces cerevisiae* origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-31673 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

CHD1 (yP-14) is recommended for detection of CHD1 of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.