SANTA CRUZ BIOTECHNOLOGY, INC.

CHRAC15 (N-18): sc-13457

BACKGROUND

DNA replication is initiated by the binding of initiation factors to the origin of replication. Nucleosomes inhibit access to the replication machinery at these origin sequences. Nucleosome remodeling factors increase the accessibility of nucleosomal DNA to transcriptional regulators. CHRAC15 and CHRAC17 are subunits of the nucleosomal remodeling factor CHRAC (chromatin accessibility complex), which increases the accessibility of nucleosomal DNA in an ATP-dependent manner. Unlike other known chromatin remodeling factors, CHRAC also functions during chromatin assembly by using ATP to convert irregular chromatin into a regular array of nucleosomes with even spacing. This conversion process occurs when CHRAC organizes randomly deposited histones into a regularly spaced array. In the presence of CHRAC, the nucleosomal ATPase ISWI catalyses several ATP-dependent transitions of chromatin structure.

REFERENCES

1. Varga-Weisz, P.D., Wilm, M., Bonte, E., Dumas, K., Mann, M. and Becker, P.B. 1997. Chromatin-remodeling factor CHRAC contains the ATPases ISWI and topoisomerase II. Nature 388: 598-602.
2. Alexiadis, V., Varga-Weisz, P.D., Bonte, E., Becker, P.B. and Gruss, C. 1998. *In vitro* chromatin remodeling by chromatin accessibility complex (CHRAC) at the SV40 origin of DNA replication. EMBO J. 17: 3428-3438.
3. Langst, G., Bonte, E.J., Corona, D.F. and Becker, P.B. 1999. Nucleosome movement by CHRAC and ISWI without disruption or trans-displacement of the histone octamer. Cell 97: 843-852.
4. Guschin, D., Geiman, T.M., Kikyo, N., Tremethick, D.J., Wolffe, A.P. and Wade, P.A. 2000. Multiple ISWI ATPase complexes from *Xenopus laevis*. Functional conservation of an ACF/CHRAC homolog. J. Biol. Chem. 275: 35248-35245.
5. Clapier, C.R., Langst, G., Corona, D.F., Becker, P.B. and Nightingale, K.P. 2001. Critical role for the histone H4 N-terminus in nucleosome remodeling by ISWI. Mol. Cell. Biol. 21: 875-883.

CHROMOSOMAL LOCATION

Genetic locus: CHRAC1 (human) mapping to 8q24.3; Chrac1 (mouse) mapping to 15 E1.

SOURCE

CHRAC15 (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of CHRAC15 of human 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-13457 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-13457 X, 200 µg/0.1 ml.

APPLICATIONS

CHRAC15 (N-18) is recommended for detection of CHRAC15 of human 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).

Suitable for use as control antibody for CHRAC15 siRNA (h): sc-38614, CHRAC15 shRNA Plasmid (h): sc-38614-SH and CHRAC15 shRNA (h) Lentiviral Particles: sc-38614-V.

CHRAC15 (N-18) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

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.

SELECT PRODUCT CITATIONS

1. Kukimoto, I., et al. 2004. The histone-fold protein complex CHRAC-15/17 enhances nucleosome sliding and assembly mediated by ACF. Mol. Cell 13: 265-277.

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 or our catalog for detailed protocols and support products.