SANTA CRUZ BIOTECHNOLOGY, INC.

CHRAC17 (D-1): sc-393397

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 remodelling 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., et al. 1997. Chromatin-remodelling factor CHRAC contians the ATPases ISWI and topoisomerase II. Nature 388: 598-602.
2. Alexiadis, V., et al. 1998. *In vitro* chromatin remodelling by chromatin accessibility complex (CHRAC) at the SV40 origin of DNA replication. EMBO J. 17: 3428-3438.
3. Langst, G., et al. 1999. Nucleosome movement by CHRAC and ISWI without disruption or *trans*-displacement of the histone octamer. Cell 97: 843-852.
4. Guschin, D., et al. 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., et al. 2001. Critical role for the Histone H4 N terminus in nucleosome remodeling by ISWI. Mol. Cell. Biol. 21: 875-883.

CHROMOSOMAL LOCATION

Genetic locus: POLE3 (human) mapping to 9q32; Pole3 (mouse) mapping to 4 B3.

SOURCE

CHRAC17 (D-1) is a mouse monoclonal antibody raised against amino acids 1-147 representing full length CHRAC17 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 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-393397 X, 200 µg/0.1 ml.

STORAGE

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

PROTOCOLS

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

APPLICATIONS

CHRAC17 (D-1) is recommended for detection of CHRAC17 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 CHRAC17 siRNA (h): sc-38615, CHRAC17 siRNA (m): sc-38616, CHRAC17 shRNA Plasmid (h): sc-38615-SH, CHRAC17 shRNA Plasmid (m): sc-38616-SH, CHRAC17 shRNA (h) Lentiviral Particles: sc-38615-V and CHRAC17 shRNA (m) Lentiviral Particles: sc-38616-V.

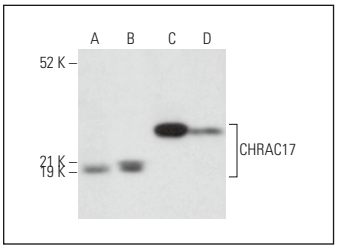
CHRAC17 (D-1) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Positive Controls: CHRAC17 (m): 293T Lysate: sc-125134, Hep G2 cell lysate: sc-2227 or HeLa whole cell lysate: sc-2200.

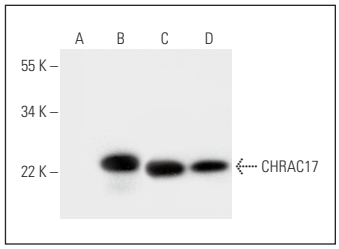
RECOMMENDED SUPPORT REAGENTS

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



CHRAC17 (D-1): sc-393397. Western blot analysis of CHRAC17 expression in HeLa (**A**), K-562 (**B**), KNRK (**C**) and PC-12 (**D**) whole cell lysates.



CHRAC17 (D-1): sc-393397. Western blot analysis of CHRAC17 expression in non-transfected 293T: sc-117752 (**A**), mouse CHRAC17 transfected 293T: sc-125134 (**B**), HeLa (**C**) and Hep G2 (**D**) whole cell lysates.

RESEARCH USE

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