

CHAMP1 (C-15): sc-84040

BACKGROUND

CHAMP1 (chromosome alignment maintaining phosphoprotein 1), also known as ZNF828 or C13orf8, is a 812 amino acid protein containing one C₂H₂-type zinc finger. CHAMP1 is required for the proper alignment of chromosomes during metaphase, undergoing CDK1-dependent phosphorylation at multiple sites during mitosis. The phosphorylation counteracts the negative chromosomal alignment regulation of the zinc-finger domain of CHAMP1. One region of CHAMP1, the FPE region, is responsible for spindle and kinetochore localization, which is essential for proper chromosome alignment. CHAMP1 interacts with MAD2L2, PGOZ, CBX1, CBX3 and CBX5, and may recruit CENPE and CENPF to the kinetochore. The CHAMP1 gene is located on chromosome 13 and is conserved in chimpanzee, Rhesus monkey, canine, bovine, mouse, rat and chicken.

REFERENCES

1. Nagase, T., et al. 2001. Prediction of the coding sequences of unidentified human genes. XX. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 8: 85-95.
2. Ouyang, J., et al. 2009. Direct binding of CoREST1 to SUMO-2/3 contributes to gene-specific repression by the LSD1/CoREST1/HDAC complex. Mol. Cell 34: 145-154.
3. Vermeulen, M., et al. 2010. Quantitative interaction proteomics and genome-wide profiling of epigenetic histone marks and their readers. Cell 142: 967-980.
4. Nozawa, R.S., et al. 2010. Human POGZ modulates dissociation of HP1 α from mitotic chromosome arms through Aurora B activation. Nat. Cell Biol. 12: 719-727.
5. Itoh, G., et al. 2011. CAMP (C13orf8, ZNF828) is a novel regulator of kinetochore-microtubule attachment. EMBO J. 30: 130-144.
6. Vandamme, J., et al. 2011. Interaction proteomics analysis of polycomb proteins defines distinct PRC1 complexes in mammalian cells. Mol. Cell. Proteomics 10: M110.002642.

CHROMOSOMAL LOCATION

Genetic locus: CHAMP1 (human) mapping to 13q34; Zfp828 (mouse) mapping to 8 A1.1.

SOURCE

CHAMP1 (C-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of CHAMP1 of human origin.

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.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-84040 P, (100 μ g 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-84040 X, 100 μ g/0.1 ml.

APPLICATIONS

CHAMP1 (C-15) is recommended for detection of CHAMP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

CHAMP1 (C-15) is also recommended for detection of CHAMP1 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for CHAMP1 siRNA (h): sc-105150, CHAMP1 siRNA (m): sc-155806, CHAMP1 shRNA Plasmid (h): sc-105150-SH, CHAMP1 shRNA Plasmid (m): sc-155806-SH, CHAMP1 shRNA (h) Lentiviral Particles: sc-105150-V and CHAMP1 shRNA (m) Lentiviral Particles: sc-155806-V.

CHAMP1 (C-15) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of CHAMP1: 89 kDa.

Molecular Weight (observed) of CHAMP1: 102/89 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

PROTOCOLS

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