

CHES1 (K-19): sc-54257



The Power to Question

BACKGROUND

CHES1 (checkpoint suppressor 1), also known as forkhead box protein N3 (FOXN3), is a member of the FOX family of transcription factors. The FOX family is a large group of proteins that share a common DNA-binding domain termed winged-helix or forkhead domain. CHES1 contains one forkhead DNA-binding domain. It localizes to the nucleus and functions as a transcriptional repressor and is critical for control of the DNA damage checkpoint. CHES1 interacts with the transcriptional regulator protein Skip via its C-terminus and its repressor activity is likely mediated by the recruitment of repressor complexes such as that composed of mSin3A, HDAC1 and HDAC2. In response to DNA damage, CHES1 interacts with Menin in an S-phase checkpoint pathway and functions as a cell cycle inhibitor. In addition, CHES1 expression is down-regulated in several tumors and may play a role in tumorigenicity.

REFERENCES

1. Pati, D., et al. 1997. Reconstitution of a Mec1-independent checkpoint in yeast by expression of a novel human forkhead cDNA. *Mol. Cell. Biol.* 17: 3037-3046.
2. Struckmann, K., et al. 2004. Impaired expression of the cell cycle regulator BTG2 is common in clear cell renal cell carcinoma. *Cancer Res.* 64: 1632-1638.
3. Katoh, M. and Katoh, M. 2004. Human FOX gene family (review). *Int. J. Oncol.* 25: 1495-1500.
4. Katoh, M. and Katoh, M. 2004. Characterization of human FOXN4 gene in silico. *Int. J. Mol. Med.* 14: 949-953.
5. Chang, J.T., et al. 2005. Identification of differentially expressed genes in oral squamous cell carcinoma (OSCC): overexpression of NPM, Cdk1 and NDRG1 and underexpression of CHES1. *Int. J. Cancer* 114: 942-949.

CHROMOSOMAL LOCATION

Genetic locus: FOXN3 (human) mapping to 14q31.3; Foxn3 (mouse) mapping to 12 E.

SOURCE

CHES1 (K-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CHES1 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-54257 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-54257 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.

APPLICATIONS

CHES1 (K-19) is recommended for detection of CHES1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

CHES1 (K-19) is also recommended for detection of CHES1 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for CHES1 siRNA (h): sc-72324, CHES1 siRNA (m): sc-72325, CHES1 shRNA Plasmid (h): sc-72324-SH, CHES1 shRNA Plasmid (m): sc-72325-SH, CHES1 shRNA (h) Lentiviral Particles: sc-72324-V and CHES1 shRNA (m) Lentiviral Particles: sc-72325-V.

CHES1 (K-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

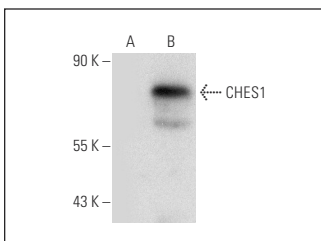
Molecular Weight of CHES1: 54 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or CHES1 (h2): 293T Lysate: sc-177057.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



CHES1 (K-19): sc-54257. Western blot analysis of CHES1 expression in non-transfected: sc-117752 (A) and human CHES1 transfected: sc-177057 (B) 293T whole cell lysates.

RESEARCH USE

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