SANTA CRUZ BIOTECHNOLOGY, INC.

FOXM1 (C-20): sc-502

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Fox family of transcription factors is a large group of proteins that share a common DNA binding domain termed a winged-helix or forkhead domain. FOXM1, also known as FKHL16, MPP2 or TRIDENT, is primarily expressed in proliferating cells. The gene encoding human FOXM1 maps to chromosome 12p13.33. The transcription element that restricts FOXM1 expression to proliferating cells is located 300 bp upstream of the start codon. FOXM1 is most abundant in thymus, testis, small intestine and colon. Alternative splicing generates FOXM1A and FOXM1B isoforms that contain PEST regions involved in rapid protein degradation. A decrease in FOXM1 expression is associated with age-related defects in cellular proliferation. Conversely, an increase in FOXM1B expression in the livers of older transgenic mice restore hepatocyte DNA replication rates to the higher rate present in young livers. FOXM1B activates the transcription of cyclin B1, cyclin D1 and Cdc25B.

CHROMOSOMAL LOCATION

Genetic locus: FOXM1 (human) mapping to 12p13.33; Foxm1 (mouse) mapping to 6 F3.

SOURCE

FOXM1 (C-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of FOXM1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-502 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-502 X, 200 µg/0.1 ml.

APPLICATIONS

FOXM1 (C-20) is recommended for detection of all isoforms of FOXM1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for FOXM1 siRNA (h): sc-43769, FOXM1 siRNA (m): sc-44877, FOXM1 shRNA Plasmid (h): sc-43769-SH, FOXM1 shRNA Plasmid (m): sc-44877-SH, FOXM1 shRNA (h) Lentiviral Particles: sc-43769-V and FOXM1 shRNA (m) Lentiviral Particles: sc-44877-V.

FOXM1 (C-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of FOXM1A isoform: 89 kDa.

Molecular Weight (predicted) of FOXM1B isoform: 83 kDa.

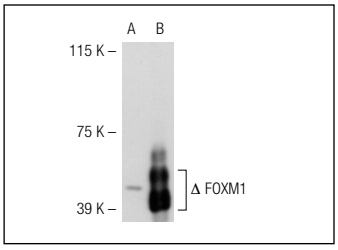
Molecular Weight (predicted) of FOXM1C isoform: 84 kDa.

Molecular Weight (observed) of FOXM1: 104-122 kDa.

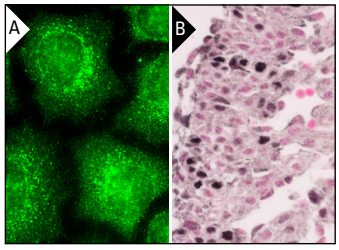
STORAGE

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

DATA



FOXM1 (C-20): sc-502. Western blot analysis of FOXM1 expression in non-transfected: sc-117752 (**A**) and truncated mouse FOXM1 transfected: sc-120309 (**B**) 293T whole cell lysates.



FOXM1 (C-20): sc-502. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization (**A**). Immunohistochemistry staining of mouse C57Bl/6 fetal heart expressing endogenous FOXM1. Paraffin section shows nuclear localization. Kindly provided by Ren, X. and Kalinichenko, V.V of Cincinnati Children's Hospital Medical Center Unpublished (**B**).

SELECT PRODUCT CITATIONS

1. Okubo, E., et al. 2003. Negative regulation of mitotic promoting factor by the checkpoint kinase Chk1 in simian virus 40 lytic infection. J. Virol. 77: 1257-1267.
2. Lefebvre, C., et al. 2010. A human B-cell interactome identifies MYB and FOXM1 as master regulators of proliferation in germinal centers. Mol. Syst. Biol. 6: 377.
3. Lok, G.T., et al. 2011. Aberrant activation of ERK/FOXM1 signaling cascade triggers the cell migration/invasion in ovarian cancer cells. PLoS ONE 6: e23790.
4. Yu, J., et al. 2011. Array-based comparative genomic hybridization identifies CDK4 and FOXM1 alterations as independent predictors of survival in malignant peripheral nerve sheath tumor. Clin. Cancer Res. 17: 1924-1934.
5. Sun, H., et al. 2011. FOXM1 expression predicts the prognosis in hepatocellular carcinoma patients after orthotopic liver transplantation combined with the Milan criteria. Cancer Lett. 306: 214-222.
6. Jiang, L.Z., et al. 2011. Overexpression of Forkhead Box M1 transcription factor and nuclear factor-kB in laryngeal squamous cell carcinoma: a potential indicator for poor prognosis. Hum. Pathol. 42: 1185-1193.

RESEARCH USE

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