SANTA CRUZ BIOTECHNOLOGY, INC.

FOXM1 (K-19): sc-500

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 (K-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of FOXM1 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-500 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-500 X, 200 µg/0.1 ml.

APPLICATIONS

FOXM1 (K-19) 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). FOXM1 (K-19) is also recommended for detection of all isoforms of FOXM1 in additional species, including equine, canine and porcine.

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

Molecular Weight (predicted) of FOXM1A/FOXM1B isoforms: 89/83 kDa.

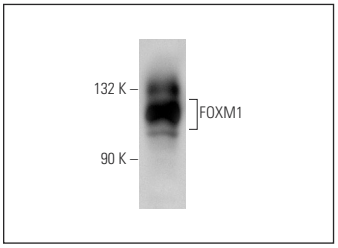
Molecular Weight (predicted) of FOXM1C isoform: 84 kDa.

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

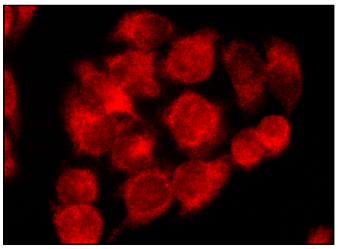
STORAGE

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

DATA



FOXM1 (K-19): sc-500. Western blot analysis of FOXM1 expression in U-2 OS whole cell lysate.



FOXM1 (K-19): sc-500. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. de las Cuevas, N., et al. 2003. Ca^{2+}/calmodulin-dependent modulation of cell cycle elements pRb and $p27^{Kip1}$ involved in the enhanced proliferation of lymphoblasts from patients with Alzheimer dementia. Neurobiol. Dis. 13: 254-263.
2. Takemura, T., et al. 2010. Reduction of Raf kinase inhibitor protein expression by Bcr-Abl contributes to chronic myelogenous leukemia proliferation. J. Biol. Chem. 285: 6585-6594.
3. Nakamura, S., et al. 2010. Development and pharmacologic characterization of deoxybromophospha sugar derivatives with antileukemic activity. Invest. New Drugs 28: 381-391.
4. Bhat, U.G., et al. 2011. Nucleophosmin interacts with FOXM1 and modulates the level and localization of FOXM1 in human cancer cells. J. Biol. Chem. 286: 41425-41433.
5. Satoki, N., et al. 2011. Bcr-Abl-mediated Raf kinase inhibitor protein suppression promotes chronic myeloid leukemia progenitor cells proliferation. Stem Cell Discover. 3: 54-66.
6. Park, Y.Y., et al. 2012. FOXM1 mediates Dox resistance in breast cancer by enhancing DNA repair. Carcinogenesis 33: 1843-1853.
7. Valverde, A., et al. 2015. Simultaneous inhibition of EGFR/VEGFR and cyclooxygenase-2 targets stemness-related pathways in colorectal cancer cells. PLoS ONE 10: e0131363.

RESEARCH USE

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