SANTA CRUZ BIOTECHNOLOGY, INC.

FOXM1 (A-11): sc-271746

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.

REFERENCES

1. Ye, H., et al. 1997. Hepatocyte nuclear factor 3/fork head homolog 11 is expressed in proliferating epithelial and mesenchymal cells of embryonic and adult tissues. Mol. Cell. Biol. 17: 1626-1641.
2. Korver, W., et al. 1997. The human TRIDENT/HFH-11/FKHL16 gene: structure, localization, and promoter characterization. Genomics 46: 435-442.

CHROMOSOMAL LOCATION

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

SOURCE

FOXM1 (A-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 737-763 at the C-terminus of FOXM1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

FOXM1 (A-11) is available conjugated to agarose (sc-271746 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-271746 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271746 PE), fluorescein (sc-271746 FITC), Alexa Fluor® 488 (sc-271746 AF488), Alexa Fluor® 546 (sc-271746 AF546), Alexa Fluor® 594 (sc-271746 AF594) or Alexa Fluor® 647 (sc-271746 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271746 AF680) or Alexa Fluor® 790 (sc-271746 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271746 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

FOXM1 (A-11) is recommended for detection of all isoforms of FOXM1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), 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 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.

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

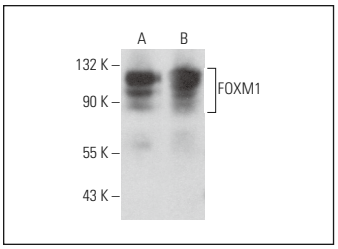
Molecular Weight (predicted) of FOXM1B isoform: 83 kDa.

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

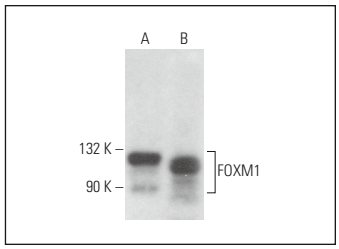
Molecular Weight (observed) of FOXM1: 104-122 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, SJRH30 cell lysate: sc-2287 or U-251-MG whole cell lysate: sc-364176.

DATA



FOXM1 (A-11): sc-271746. Western blot analysis of FOXM1 expression in MCF7 (**A**) and SJRH30 (**B**) whole cell lysates.



FOXM1 (A-11): sc-271746. Western blot analysis of FOXM1 expression in U-251-MG (**A**) and NTERA-2 cl.D1 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Bonet, C., et al. 2012. Aurora B is regulated by the mitogen-activated protein kinase/extracellular signal-regulated kinase (MAPK/ERK) signaling pathway and is a valuable potential target in melanoma cells. J. Biol. Chem. 287: 29887-29898.
2. Pek, M., et al. 2017. Oncogenic KRAS-associated gene signature defines co-targeting of CDK4/6 and MEK as a viable therapeutic strategy in colorectal cancer. Oncogene 36: 4975-4986.
3. Ciamporcero, E., et al. 2018. Crosstalk between Nrf2 and YAP contributes to maintaining the antioxidant potential and chemoresistance in bladder cancer. Free Radic. Biol. Med. 115: 447-457.
4. Wang, L., et al. 2019. MicroRNA-876-5p inhibits the progression of glioblastoma multiforme by directly targeting forkhead box M1. Oncol. Rep. 41: 702-710.

RESEARCH USE

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