SANTA CRUZ BIOTECHNOLOGY, INC.

E2F-5 (C-8): sc-374268

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The human retinoblastoma gene product appears to play an important role in the negative regulation of cell proliferation. Functional inactivation of Rb can be mediated either through mutation or as a consequence of interaction with DNA tumor virus-encoded proteins. Of all the Rb associations described to date, the identification of a complex between Rb and the transcription factor E2F most directly implicates Rb in regulation of cell proliferation. E2F was originally identified through its role in transcriptional activation of the adenovirus E2 promoter. Sequences homologous to the E2F binding site have been found upstream of a number of genes that encode proteins with putative functions in the G_1 and S phases of the cell cycle. E2F-1 is a member of a broader family of transcription regulators including E2F-2, E2F-3, E2F-4, E2F-5, E2F-6 and E2F-7 each of which forms heterodimers with a second protein, DP-1, forming an "active" E2F transcriptional regulatory complex.

REFERENCE

1. Chellappan, S., et al. 1991. The E2F transcription factor is a cellular target for the RB protein. Cell 65: 1053-1061.
2. Chittenden, T., et al. 1991. The T/E1A-binding domain of the retinoblastoma product can interact selectively with a sequence-specific DNA-binding protein. Cell 65: 1073-1082.

CHROMOSOMAL LOCATION

Genetic locus: E2F5 (human) mapping to 8q21.2; E2f5 (mouse) mapping to 3 A1.

SOURCE

E2F-5 (C-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 303-331 at the C-terminus of E2F-5 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-374268 X, 200 µg/0.1 ml.

E2F-5 (C-8) is available conjugated to agarose (sc-374268 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-374268 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374268 PE), fluorescein (sc-374268 FITC), Alexa Fluor® 488 (sc-374268 AF488), Alexa Fluor® 546 (sc-374268 AF546), Alexa Fluor® 594 (sc-374268 AF594) or Alexa Fluor® 647 (sc-374268 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374268 AF680) or Alexa Fluor® 790 (sc-374268 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374268 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

E2F-5 (C-8) is recommended for detection of E2F-5 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

E2F-5 (C-8) is also recommended for detection of E2F-5 in additional species, including equine, canine, bovine and porcine.

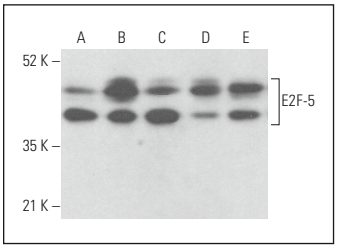
Suitable for use as control antibody for E2F-5 siRNA (m): sc-35249, E2F-5 siRNA (h): sc-35250, E2F-5 shRNA Plasmid (m): sc-35249-SH, E2F-5 shRNA Plasmid (h): sc-35250-SH, E2F-5 shRNA (m) Lentiviral Particles: sc-35249-V and E2F-5 shRNA (h) Lentiviral Particles: sc-35250-V.

E2F-5 (C-8) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

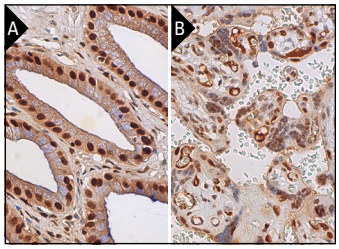
Molecular Weight of E2F-5: 59 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, A-431 whole cell lysate: sc-2201 or Jurkat whole cell lysate: sc-2204.

DATA



E2F-5 (C-8): sc-374268. Western blot analysis of E2F-5 expression in MEG-01 (**A**), A-431 (**B**), HL-60 (**C**), Jurkat (**D**) and M1 (**E**) whole cell lysates.



E2F-5 (C-8): sc-374268. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing nuclear and cytoplasmic staining of glandular cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing nuclear staining of trophoblastic cells (**B**).

SELECT PRODUCT CITATIONS

1. Kropp, J., et al. 2015. MiR-98 delays skeletal muscle differentiation by down-regulating E2F-5. Biochem. J. 466: 85-93.
2. Karmakar, D., et al. 2020. E2F-5 promotes prostate cancer cell migration and invasion through regulation of TFPI2, MMP-2 and MMP-9. Carcinogenesis 41: 1767-1780.
3. Sanchez, L., et al. 2022. MicroRNA-dependent suppression of biological pacemaker activity induced by TBX18. Cell Rep. Med. 3: 100871.
4. Bhat, T.A., et al. 2023. Decursin inhibits EGFR-ERK1/2 signaling axis in advanced human prostate carcinoma cells. Prostate 83: 534-546.

RESEARCH USE

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