SANTA CRUZ BIOTECHNOLOGY, INC.

E2F-6 (N-19): sc-8175

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.

REFERENCES

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.
3. Helin, K., et al. 1992. A cDNA encoding a pRB-binding protein with properties of the transcription factor E2F. Cell 70: 337-350.
4. Helin, K., et al. 1993. Heterodimerization of the transcription factors E2F-1 and DP-1 leads to cooperative transactivation. Genes Dev. 7: 1850-1861.

CHROMOSOMAL LOCATION

Genetic locus: E2F6 (human) mapping to 2p25.1; E2f6 (mouse) mapping to 12 A1.1.

SOURCE

E2F-6 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of E2F-6 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-8175 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-8175 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

RESEARCH USE

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

APPLICATIONS

E2F-6 (N-19) is recommended for detection of E2F-6 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

E2F-6 (N-19) is also recommended for detection of E2F-6 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for E2F-6 siRNA (h): sc-37819, E2F-6 siRNA (m): sc-37820, E2F-6 shRNA Plasmid (h): sc-37819-SH, E2F-6 shRNA Plasmid (m): sc-37820-SH, E2F-6 shRNA (h) Lentiviral Particles: sc-37819-V and E2F-6 shRNA (m) Lentiviral Particles: sc-37820-V.

E2F-6 (N-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of E2F-6: 35 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, Jurkat nuclear extract: sc-2132 or HeLa nuclear extract: sc-2120.

SELECT PRODUCT CITATIONS

1. Halaban, R., et al. 2000. Deregulated E2F transcriptional activity in autonomously growing melanoma cells. J. Exp. Med. 191: 1005-1016.
2. Kusek, J.C., et al. 2001. Expression of the E2F and retinoblastoma families of proteins during neural differentiation. Brain Res. Bull. 54: 187-198.
3. Ogawa, H., et al. 2002. A complex with chromatin modifiers that occupies E2F- and Myc-responsive genes in G_0 cells. Science 296: 1132-1136.
4. von Willebrand, M., et al. 2003. The tyrphostin AG1024 accelerates the degradation of phosphorylated forms of retinoblastoma protein (pRb) and restores pRb tumor suppressive function in melanoma cells. Cancer Res. 63: 1420-1429.
5. Giangrande, P.H., et al. 2004. A role for E2F-6 in distinguishing G_1/S- and G_2/M-specific transcription. Genes Dev. 18: 2941-2951.
6. Dabrowska, M., et al. 2004. Regulation of transcription of the human MRP7 gene. Characteristics of the basal promoter and identification of tumor-derived transcripts encoding additional 5' end heterogeneity. Gene 341: 129-139.
7. Palacios, J., et al. 2005. Phenotypic characterization of BRCA1 and BRCA2 tumors based in a tissue microarray study with 37 immunohistochemical markers. Breast Cancer Res. Treat. 90: 5-14.
8. Pohlers, M., et al. 2005. A role for E2F-6 in the restriction of male-germ-cell-specific gene expression. Curr. Biol. 15: 1051-1057.

MONOS Satisfaction Guaranteed

Try **E2F-6 (TFE61): sc-53273** or **E2F-6 (E-5): sc-390022**, our highly recommended monoclonal alternatives to E2F-6 (N-19).