

TFIIIC220 (F-12): sc-398780

BACKGROUND

RNA polymerase (Pol) III synthesizes tRNA, 5s rRNA, 7SL RNA and U6 snRNA and is overexpressed in many transformed cell lines and tumors *in vivo*, since cells must duplicate its protein components before division. Therefore, in order to maintain rapid growth, cells must produce a high level of Pol III transcribed RNA, which requires the presence of the TFIIB and TFIIC2 transcription factor complexes. The TFIIC2 complex is composed of five subunits, TFIIC220, TFIIC110, TFIIC102, TFIIC90 and TFIIC63, that are overexpressed in adenovirus transformed cells as well as in malignant cells *in vivo*, such as ovarian carcinomas. TFIIC2 recruits RNA Pol III and TFIIB to promoter elements and may be a key component in the deregulation of malignant cells. The TFIIB complex includes the TATA-binding protein (TBP), TFIIB-related factor 1 (BRF1) and TFIIB", the expression of which are also upregulated in transformed cells. In many carcinomas, the tumor suppressors retinoblastoma (RB) and p53 are inactivated, which affects their ability to bind and inactivate the function of TFIIB.

REFERENCES

1. Scott, M.R., et al. 1983. Activation of mouse genes in transformed cells. *Cell* 34: 557-567.
2. Chen, W., et al. 1997. Expression of neural BC1 RNA: induction in murine tumours. *Eur. J. Cancer* 33: 288-292.
3. Hsieh, Y.J., et al. 1999. The TFIIC90 subunit of TFIIC interacts with multiple components of the RNA polymerase III machinery and contains a histone-specific acetyltransferase activity. *Mol. Cell. Biol.* 19: 7697-7704.
4. Winter, A.G., et al. 2000. RNA polymerase III transcription factor TFIIC2 is overexpressed in ovarian tumors. *Proc. Natl. Acad. Sci. USA* 97: 12619-12624.

CHROMOSOMAL LOCATION

Genetic locus: GTF3C1 (human) mapping to 16p12.1.

SOURCE

TFIIIC220 (F-12) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of TFIIC220 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-398780 X, 200 µg/0.1 ml.

TFIIIC220 (F-12) is available conjugated to agarose (sc-398780 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398780 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398780 PE), fluorescein (sc-398780 FITC), Alexa Fluor® 488 (sc-398780 AF488), Alexa Fluor® 546 (sc-398780 AF546), Alexa Fluor® 594 (sc-398780 AF594) or Alexa Fluor® 647 (sc-398780 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398780 AF680) or Alexa Fluor® 790 (sc-398780 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

TFIIIC220 (F-12) is recommended for detection of TFIIC220 of 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 TFIIC220 siRNA (h): sc-38544, TFIIC220 shRNA Plasmid (h): sc-38544-SH and TFIIC220 shRNA (h) Lentiviral Particles: sc-38544-V.

TFIIIC220 (F-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of TFIIC220: 220 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HEK293 whole cell lysate: sc-45136 or Jurkat whole cell lysate: sc-2204.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



TFIIIC220 (F-12): sc-398780. Western blot analysis of TFIIC220 expression in HeLa (A) and Jurkat (B) whole cell lysates.

TFIIIC220 (F-12): sc-398780. Western blot analysis of TFIIC220 expression in HEK293 whole cell lysate.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.