



## GTF3A (C-20): sc-84298

### BACKGROUND

Ribosomal 5S RNA (5S rRNA) exists as part of a larger ribosomal subunit and is thought to stabilize ribosome structure, thereby helping protein synthesis. GTF3A (general transcription factor IIIA) is also known as Factor A, AP2 or TFIIIA (transcription factor IIIA) and is a 365 amino acid protein that is localized to the nucleus and is primarily expressed in brain and ovary. GTF3A is a Pol III transcription factor that binds to the internal control region of 5S RNA genes in order to regulate their expression. After GTF3A binds to the internal control region of the 5S RNA gene, the transcription initiation complex is able to form. GTF3A is also a transcript chaperone for 5S RNA to be moved to the cytoplasm where it is stored as a GTF3A-5S RNA complex, which is known as a 7S ribonucleoprotein. GTF3A possesses nine C<sub>2</sub>H<sub>2</sub>-type zinc fingers and has a C-terminal region without zinc fingers. The multiple zinc finger configuration of GTF3A allows it to bind to DNA at many locations along the internal control region, and is thought to be important for GTF3A to stay bound to DNA while facilitating many rounds of transcription.

### REFERENCES

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2. Moorefield, B. and Roeder, R.G. 1994. Purification and characterization of human transcription factor IIIA. *J. Biol. Chem.* 269: 20857-20865.
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4. Drew, P.D., et al. 1995. Cloning and expression analysis of a human cDNA homologous to *Xenopus* TFIIIA. *Gene* 159: 215-218.
5. Fridell, R.A., et al. 1996. Amphibian transcription factor IIIA proteins contain a sequence element functionally equivalent to the nuclear export signal of human immunodeficiency virus type 1. *Rev. Proc. Natl. Acad. Sci. USA* 93: 2936-2940.
6. Szymanski, M., et al. 2002. 5S ribosomal RNA database. *Nucleic Acids Res.* 30: 176-178.
7. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 600860. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
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### CHROMOSOMAL LOCATION

Genetic locus: GTF3A (human) mapping to 13q12.2.

### SOURCE

GTF3A (C-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of GTF3A of human origin.

### STORAGE

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

### PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-84298 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

GTF3A (C-20) is recommended for detection of GTF3A of human origin by Western Blotting (starting dilution 1:200, 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 GTF3A siRNA (h): sc-75210, GTF3A shRNA Plasmid (h): sc-75210-SH and GTF3A shRNA (h) Lentiviral Particles: sc-75210-V.

Molecular Weight of GTF3A: 42 kDa.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### RESEARCH USE

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