SANTA CRUZ BIOTECHNOLOGY, INC.

GABP-α (C-20): sc-13442

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The transcription factor GA-binding protein (GABP) is composed of two subunits, the Ets-related GABP-α and a GABP-α-associated subunit, GABP-β. GABP-α binds to a specific DNA sequence and GABP-β exists as β1 and β2 splice variants that differ in their C-termini. In primary neuronal cultures, GABP-β is expressed in both the cytoplasm and the nucleus, whereas GABP-α is expressed mainly in the nucleus. GABP is constitutively expressed as either a GABP-αβ heterodimer or a GABP-αβ heterotetramer, both of which can modify GABP-dependent transcription *in vitro* and *in vivo*. The GABP-αβ tetrameric complex performs many different functions, such as stimulating transcription of the adenovirus E4 gene, differentially activating BRCA1 expression in human breast cell lines, potentiating Tat-mediated activation of long terminal repeat promoter transcription and viral replication in certain cell types, acting as a coordinator of mitochrondrial and nuclear transcription for cytochrome oxidase in neurons and assisting in the regulation of rpL32 gene transcription.

REFERENCES

1. Suzuki, F., et al. 1998. Functional interactions of transcription factor human GA-binding protein subunits. J. Biol. Chem. 273: 29302-29308.
2. Sawada, J., et al. 1999. Synergistic transcriptional activation by hGABP and select members of the activation transcription factor/cAMP response element-binding protein family. J. Biol. Chem. 274: 35475-35482.
3. Verhoef, K., et al. 1999. Evolution of the human immunodeficiency virus type 1 long terminal repeat promoter by conversion of an NFκB enhancer element into a GABP binding site. J. Virol. 73: 1331-1340.
4. Zhang, C., et al. 2000. Depolarizing stimulation upregulates GA-binding protein in neurons: a transcription factor involved in the bigenomic expression of cytochrome oxidase subunits. Eur. J. Neurosci. 12: 1013-1023.

CHROMOSOMAL LOCATION

Genetic locus: GABPA (human) mapping to 21q21.3; Gabpa (mouse) mapping to 16 C3.3.

SOURCE

GABP-α (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of GABP-α 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.

Blocking peptide available for competition studies, sc-13442 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-13442 X, 200 µg/0.1 ml.

STORAGE

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

APPLICATIONS

GABP-α (C-20) is recommended for detection of GABP-α 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).

GABP-α (C-20) is also recommended for detection of GABP-α in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for GABP-α siRNA (h): sc-37100, GABP-α siRNA (m): sc-37101, GABP-α shRNA Plasmid (h): sc-37100-SH, GABP-α shRNA Plasmid (m): sc-37101-SH, GABP-α shRNA (h) Lentiviral Particles: sc-37100-V and GABP-α shRNA (m) Lentiviral Particles: sc-37101-V.

GABP-α (C-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of GABP-α: 60 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, MCF7 nuclear extract: sc-2149 or SKBR-3 nuclear extract: sc-2134.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Tsuchimochi, K., et al. 2005. Identification of a crucial site for Synoviolin expression. Mol. Cell. Biol. 25: 7344-7356.
2. Ongwijitwat, S., et al. 2005. Is nuclear respiratory factor 2 a master transcriptional coordinator for all ten nuclear-encoded cytochrome c oxidase subunits in neurons? Gene 360: 65-77.
3. Wallerman, O., et al. 2009. Molecular interactions between HNF4a, FOXA2 and GABP identified at regulatory DNA elements through ChIP-sequencing. Nucleic Acids Res. 37: 7498-7508.

RESEARCH USE

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