SANTA CRUZ BIOTECHNOLOGY, INC.

# GABP-β1 (D-15): sc-13443

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. Atlas, E., et al. 2000. GA-binding protein alpha/beta is critical regulator of the BRCA1 promoter. Oncogene 19: 1933-1940.
5. 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.
6. Chinenov, Y., et al. 2000. The α and β subunits of the GA-binding protein form a stable heterodimer in solution. Revised model of heterotetrameric complex assembly. J. Biol. Chem. 275: 7749-7756.


## CHROMOSOMAL LOCATION

Genetic locus: GABPB1 (human) mapping to 15q21.2; Gabpb1 (mouse) mapping to 2 F1.

## SOURCE

GABP-β1 (D-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of GABP-β1 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-13443 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-13443 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

GABP-β1 (D-15) is recommended for detection of GABP-β1 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-β1 (D-15) is also recommended for detection of GABP-β1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for GABP-β1/2 siRNA (h): sc-37903, GABP-β1/2 siRNA (m): sc-37904, GABP-β1/2 shRNA Plasmid (h): sc-37903-SH, GABP-β1/2 shRNA Plasmid (m): sc-37904-SH, GABP-β1/2 shRNA (h) Lentiviral Particles: sc-37903-V and GABP-β1/2 shRNA (m) Lentiviral Particles: sc-37904-V.

GABP-β1 (D-15) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

## 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.

## 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 or our catalog for detailed protocols and support products.