

GABP- β 1/2 (N-20): sc-13445

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 β 1 and β 2 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- $\alpha\beta$ heterodimer or a GABP- $\alpha\beta$ heterotetramer, both of which can modify GABP-dependent transcription *in vitro* and *in vivo*. The GABP- $\alpha\beta$ 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 mitochondrial and nuclear transcription for cytochrome oxidase in neurons and assisting in the regulation of rpl32 gene transcription.

REFERENCES

- Martin, M.E., et al. 1996. Redox regulation of GA-binding protein- α DNA binding activity. *J. Biol. Chem.* 271: 25617-25623.
- Suzuki, F., et al. 1998. Functional interactions of transcription factor human GA-binding protein subunits. *J. Biol. Chem.* 273: 29302-29308.
- 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.
- Verhoef, K., et al. 1999. Evolution of the human immunodeficiency virus type 1 long terminal repeat promoter by conversion of an NF κ B enhancer element into a GABP binding site. *J. Virol.* 73: 1331-1340.
- 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: GABPB1 (human) mapping to 15q21.2, GABPB2 (human) mapping to 1q21.2; Gabpb1 (mouse) mapping to 2 F1, Gabpb2 (mouse) mapping to 3 F2.1.

SOURCE

GABP- β 1/2 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of GABP- β 1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-13445 P, (100 μ g 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-13445 X, 200 μ g/0.1 ml.

APPLICATIONS

GABP- β 1/2 (N-20) is recommended for detection of GABP- β 1 and GABP- β 2 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- β 1/2 (N-20) is also recommended for detection of GABP- β 1 GABP- β 2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for GABP- β 1/2 siRNA (h): sc-37903, GABP- β 1/2 siRNA (m): sc-37904, GABP- β 1/2 shRNA Plasmid (h): sc-37903-SH, GABP- β 1/2 shRNA Plasmid (m): sc-37904-SH, GABP- β 1/2 shRNA (h) Lentiviral Particles: sc-37903-V and GABP- β 1/2 shRNA (m) Lentiviral Particles: sc-37904-V.

GABP- β 1/2 (N-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of GABP- β 1/2: 42 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

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

- Tsushima, K., et al. 2005. Identification of a crucial site for Synoviolin expression. *Mol. Cell. Biol.* 25: 7344-7356.
- Patton, J., et al. 2006. Identification of functional elements in the murine GABP- α /ATP synthase coupling factor 6 bi-directional promoter. *Gene* 369: 35-44.

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.



Try **GABP- β 1/2 (E-7): sc-271571** or **GABP- β 1/2 (E-1): sc-271531**, our highly recommended monoclonal alternatives to GABP- β 1/2 (N-20).