SANTA CRUZ BIOTECHNOLOGY, INC.

GABP-β1/2 (J-25): sc-133605

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. Martin, M.E., et al. 1996. Redox regulation of GA-binding protein-α DNA binding activity. J. Biol. Chem. 271: 25617-25623.
2. Suzuki, F., et al. 1998. Functional interactions of transcription factor human GA-binding protein subunits. J. Biol. Chem. 273: 29302-29308.
3. 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.
4. Hoare, S., et al. 1999. Identification of a GABP-α/β binding site involved in the induction of oxytocin receptor gene expression in human breast cells, potentiation by c-Fos/c-Jun. Endocrinology 140: 2268-2279.
5. 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.
6. Atlas, E., et al. 2000. GA-binding protein α/β is critical regulator of the BRCA1 promoter. Oncogene 19: 1933-1940.
7. 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: GABPB2 (human) mapping to 15q21.2; Gabpb2 (mouse) mapping to 3 F2.1.

SOURCE

GABP-β1/2 (J-25) is an affinity purified rabbit polyclonal antibody raised against synthetic GABP-β1/2 peptide of human origin.

PRODUCT

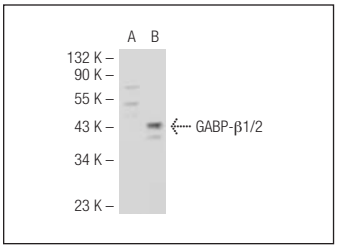
Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

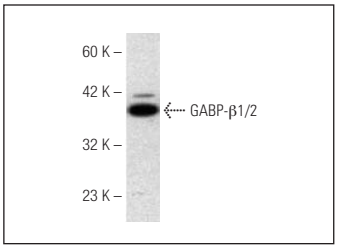
GABP-β1/2 (J-25) is recommended for detection of GABP-β1/2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 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.

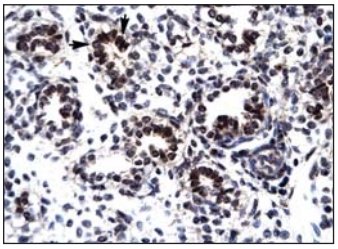
DATA



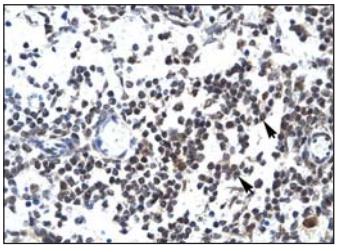
GABP-β1/2 (J-25): sc-133605. Western blot analysis of GABP-β1/2 expression in non-transfected: sc-117752 (**A**) and human GABP-β1/2 transfected: sc-113433 (**B**) 293T whole cell lysates.



GABP-β1/2 (J-25): sc-133605. Western blot analysis of GABP-β1/2 expression in human fetal lung tissue extract.



GABP-β1/2 (J-25): sc-133605. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human lung tissue showing nuclear localization.



GABP-β1/2 (J-25): sc-133605. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human spleen tissue showing nuclear localization.

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.