SANTA CRUZ BIOTECHNOLOGY, INC.

GABP-α (H-2): sc-28311

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.

REFERENCESCHROMOSOMAL LOCATION

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

SOURCE

GABP-α (H-2) is a mouse monoclonal antibody raised against amino acids 1-180 of GABP-α of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain 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-28311 X, 200 µg/0.1 ml.

APPLICATIONS

GABP-α (H-2) is recommended for detection of GABP-α of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1,000), 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-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 (H-2) 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, A-431 nuclear extract: sc-2122 or SW480 nuclear extract: sc-2155.

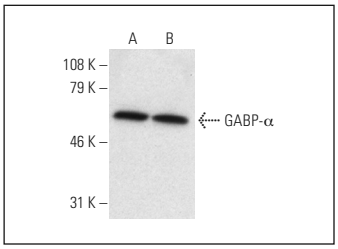
RESEARCH USE

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

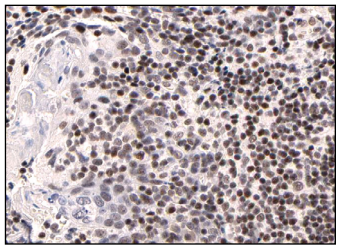
STORAGE

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

DATA



GABP-α (H-2): sc-28311. Western blot analysis of GABP-α expression in HeLa (**A**) and A-431 (**B**) nuclear extracts.



GABP-α (H-2): sc-28311. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing strong nuclear staining of follicle cells and weak nuclear staining in non-follicle and epithelial cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

1. Lai, C.B., et al. 2009. Creation of the two isoforms of rodent NKG2D was driven by a B1 retrotransposon insertion. Nucleic Acids Res. 37: 3032-3043.
2. Nischan, J., et al. 2009. Binding sites for ETS family of transcription factors dominate the promoter regions of differentially expressed genes in abdominal aortic aneurysms. Circ. Cardiovasc. Genet. 2: 565-572.
3. Huang, C.C. and Chang, W.S. 2009. Cooperation between NRF-2 and YY-1 transcription factors is essential for triggering the expression of the PREPL-C2ORF34 bidirectional gene pair. BMC Mol. Biol. 10: 67.
4. Arduini, A., et al. 2011. Mitochondrial biogenesis fails in secondary biliary cirrhosis in rats leading to mitochondrial DNA depletion and deletions. Am. J. Physiol. Gastrointest. Liver Physiol. 301: G119-G127.
5. Schachterle, W., et al. 2012. ETS-dependent regulation of a distal Gata4 cardiac enhancer. Dev. Biol. 361: 439-449.
6. Manukjan, G., et al. 2015. Expression of the ETS transcription factor GABPα is positively correlated to the BCR-ABL1/ABL1 ratio in CML patients and affects imatinib sensitivity *in vitro*. Exp. Hematol. 43: 880-890.
7. Ripperger, T., et al. 2015. The heteromeric transcription factor GABP activates the ITGAM/CD11b promoter and induces myeloid differentiation. Biochim. Biophys. Acta 1849: 1145-1154.
8. Yun, S.I., et al. 2020. Ubiquitin-specific protease 21 promotes colorectal cancer metastasis by acting as a Fra-1 deubiquitinase. Cancers 12 pii: E207.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.