SANTA CRUZ BIOTECHNOLOGY, INC.

GABP-β1/2 (E-7): sc-271571



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 mitochrondrial and nuclear transcription for cytochrome oxidase in neurons and assisting in the regulation of rpL32 gene transcription.

REFERENCES

- 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.

CHROMOSOMAL LOCATION

Genetic locus: GABPB1 (human) mapping to 15q21.2, GABPB2 (human) mapping to 1q21.3.

SOURCE

GABP- β 1/2 (E-7) is a mouse monoclonal antibody raised against amino acids 131-395 mapping at the C-terminus of GABP- β 1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} 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-271571 X, 200 μ g/0.1 ml.

GABP-β1/2 (E-7) is available conjugated to agarose (sc-271571 AC), 500 μg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-271571 HRP), 200 μg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271571 PE), fluorescein (sc-271571 FITC), Alexa Fluor[®] 488 (sc-271571 AF488), Alexa Fluor[®] 546 (sc-271571 AF546), Alexa Fluor[®] 594 (sc-271571 AF594) or Alexa Fluor[®] 647 (sc-271571 AF647), 200 μg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-271571 AF680) or Alexa Fluor[®] 790 (sc-271571 AF790), 200 μg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

Store at 4° C, **D0 NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

GABP- β 1/2 (E-7) is recommended for detection of GABP- β 1 and GABP- β 2 of human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

GABP- β 1/2 (E-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of GABP-61/2: 42 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, THP-1 cell lysate: sc-2238 or T-47D cell lysate: sc-2293.

DATA





GABP- β 1/2 (E-7): sc-271571. Western blot analysis of GABP- β 1/2 expression in Jurkat (**A**), T-47D (**B**), A-375 (**C**), THP-1 (**D**) and Caco-2 (**E**) whole cell lysates and HeLa nuclear extract (**F**). Detection reagent used: m-IgG κ BP-HRP: sc-516102.

 $GABP\text{-}\beta1/2$ (E-7): sc-271571. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

- Zhang, T., et al. 2017. SDHD promoter mutations ablate GABP transcription factor binding in melanoma. Cancer Res. 77: 1649-1661.
- Liu, R., et al. 2018. Regulation of mutant TERT by BRAF V600E/MAP kinase pathway through Fos/GABP in human cancer. Nat. Commun. 9: 579.
- Bullock, M., et al. 2019. ETS factor ETV5 activates the mutant telomerase reverse transcriptase promoter in thyroid cancer. Thyroid 29: 1623-1633.
- Liu, R., et al. 2021. Therapeutic targeting of FOS in mutant TERT cancers through removing TERT suppression of apoptosis via regulating survivin and TRAIL-R2. Proc. Natl. Acad. Sci. USA 118: e2022779118.
- Prieto-Carrasco, R., et al. 2021. Progressive reduction in mitochondrial mass is triggered by alterations in mitochondrial biogenesis and dynamics in chronic kidney disease induced by 5/6 nephrectomy. Biology 10: 349.
- Xing, X., et al. 2022. Downregulation and hypermethylation of GABPB1 is associated with aggressive thyroid cancer features. Cancers 14: 1385.

RESEARCH USE

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