

GABP- β 1/2 (E-1): sc-271531

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

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 NF κ B enhancer element into a GABP binding site. *J. Virol.* 73: 1331-1340.

CHROMOSOMAL LOCATION

Genetic locus: GABPB1 (human) mapping to 15q21.2, GABPB2 (human) mapping to 1q21.3; Gabpb1 (mouse) mapping to 2 F1, Gabpb2 (mouse) mapping to 3 F2.1.

SOURCE

GABP- β 1/2 (E-1) 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 κ 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-271531 X, 200 μ g/0.1 ml.

GABP- β 1/2 (E-1) is available conjugated to agarose (sc-271531 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271531 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271531 PE), fluorescein (sc-271531 FITC), Alexa Fluor[®] 488 (sc-271531 AF488), Alexa Fluor[®] 546 (sc-271531 AF546), Alexa Fluor[®] 594 (sc-271531 AF594) or Alexa Fluor[®] 647 (sc-271531 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-271531 AF680) or Alexa Fluor[®] 790 (sc-271531 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

GABP- β 1/2 (E-1) is recommended for detection of GABP- β 1 and GABP- β 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

GABP- β 1/2 (E-1) is also recommended for detection of GABP- β 1 and GABP- β 2 in additional species, including canine and porcine.

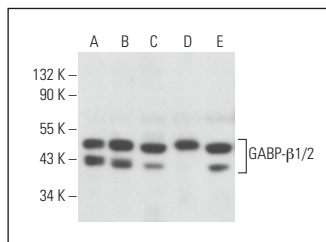
Suitable for use as control antibody for GABP- β 1/2 siRNA (h): sc-37903, GABP- β 1/2 siRNA (m): sc-37904, GABP- β 1/2 shRNA Plasmid (h): sc-37903-SH, GABP- β 1/2 shRNA Plasmid (m): sc-37904-SH, GABP- β 1/2 shRNA (h) Lentiviral Particles: sc-37903-V and GABP- β 1/2 shRNA (m) Lentiviral Particles: sc-37904-V.

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

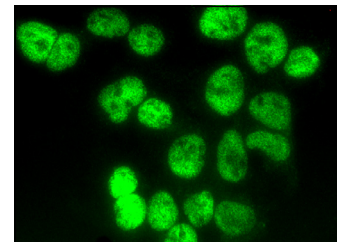
Molecular Weight of GABP- β 1/2: 42 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, RAW 264.7 whole cell lysate: sc-2211 or NIH/3T3 whole cell lysate: sc-2210.

DATA



GABP- β 1/2 (E-1): sc-271531. Western blot analysis of GABP- β 1/2 expression in HeLa nuclear extract (A) and SJRH30 (B), SP2/O (C), NIH/3T3 (D) and RAW 264.7 (E) whole cell lysates.



GABP- β 1/2 (E-1): sc-271531. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Prieto-Ruiz, J.A., et al. 2018. Expression of the human TIMM23 and TIMM23B genes is regulated by the GABP transcription factor. *Biochim. Biophys. Acta Gene Regul. Mech.* 1861: 80-94.

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 for detailed protocols and support products.