SANTA CRUZ BIOTECHNOLOGY, INC.

GABP-α (H-180): sc-22810

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.

CHROMOSOMAL LOCATION

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

SOURCE

GABP-α (H-180) is a rabbit polyclonal antibody raised against amino acids 1-180 of GABP-α of human origin.

PRODUCT

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

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-22810 X, 200 µg/0.1 ml.

APPLICATIONS

GABP-α (H-180) is recommended for detection of GABP-α 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GABP-α (H-180) is also recommended for detection of GABP-α in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for GABP-α siRNA (h): sc-37100, GABP-α siRNA (m): sc-37101, GABP-a 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-180) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

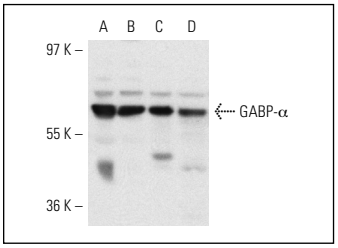
Molecular Weight of GABP-α: 60 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, MCF7 nuclear extract: sc-2149 or SK-BR-3 nuclear extract: sc-2134.

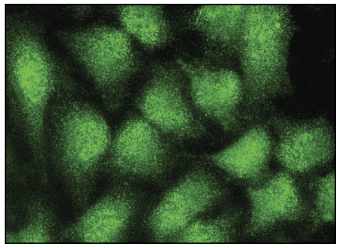
STORAGE

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-180): sc-22810. Western blot analysis of GABP-α expression in HeLa (**A**), MCF7 (**B**), SK-BR-3 (**C**) and SW480 (**D**) nuclear extracts.



GABP-α (H-180): sc-22810. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. 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.
2. Pang, L., et al. 2006. Maturation stage-specific regulation of megakaryopoiesis by pointed-domain Ets proteins. Blood 108: 2198-2206.
3. Smith, K.T., et al. 2006. The gene encoding the fragile X RNA-binding protein is controlled by nuclear respiratory factor 2 and the CREB family of transcription factors. Nucleic Acids Res. 34: 1205-1215.
4. Thompson, C., et al. 2011. Decreased expression of BRCA1 in SK-BR-3 cells is the result of aberrant activation of the GABP β promoter by an NRF-1-containing complex. Mol. Cancer 10: 62.
5. Park, S.K., et al. 2011. A strong promoter activity of pre-B cell stage-specific Crlz1 gene is caused by one distal LEF-1 and multiple proximal Ets sites. Mol. Cells 32: 67-76.
6. Ritter, H.D., et al. 2012. The unliganded glucocorticoid receptor positively regulates the tumor suppressor gene BRCA1 through GABP β. Mol. Cancer Res. 10: 558-569.
7. Bremer, K., et al. 2012. Transcriptional regulation of temperature-induced remodeling of muscle bioenergetics in goldfish. Am. J. Physiol. Regul. Integr. Comp. Physiol. 303: R150-R158.

RESEARCH USE

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