GABP-β1/2 (h3): 293T Lysate: sc-175998



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 $\beta 1$ and $\beta 2$ 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

- 1. Martin, M.E., et al. 1996. Redox regulation of GA-binding protein- α DNA binding activity. J. Biol. Chem. 271: 25617-25623.
- 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.
- 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: GABPB1 (human) mapping to 15q21.2; GABPB2 (human) mapping to 1q21.2.

PRODUCT

GABP- β 1/2 (h3): 293T Lysate represents a lysate of human GABP- β 1/2 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

GABP- β 1/2 (h3): 293T Lysate is suitable as a Western Blotting positive control for human reactive GABP- β 1/2 antibodies. Recommended use: 10-20 μ 1 per lane

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

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.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com