SANTA CRUZ BIOTECHNOLOGY, INC.

GMEB-2 (h): 293 Lysate: sc-114627

BACKGROUND

GMEB-2 (glucocorticoid modulatory element binding protein 2), also known as PIF79 (parvovirus initiation factor p79) or P79PIF, is a DNA-binding protein that plays a crucial role modulating transcription upon activation by steroid hormones. GMEB-2 is ubiquitously expressed with preferential expression in developmentally important tissues, such as testis, bone marrow, placenta and fetal tissues. It localizes to the nucleus and cytoplasm and contains a SAND domain near its N-terminus and a C-terminal coiled-coil structure. GMEB-2 functions as a homodimer or as a heterodimer with GMEB-1. The formed complex specifically binds to glucocorticoid modulatory elements (GME) in the promoter region of target genes and recruits the histone acetylase CREB binding protein (CBP) during glucocorticoid signaling. This acts to increase sensitivity to low concentrations of glucocorticoids. In addition, GMEB-2 functions as an auxiliary factor required for parvovirus replication.

REFERENCES

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2. Theriault, J.R., et al. 1999. Cloning and characterization of hGMEB1, a novel glucocorticoid modulatory element binding protein. FEBS Lett. 452: 170-176.
3. Nagase, T., et al. 2000. Prediction of the coding sequences of unidentified human genes. XV. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 6: 337-345.
4. Kaul, S., et al. 2000. Properties of the glucocorticoid modulatory element binding proteins GMEB-1 and -2: potential new modifiers of glucocorticoid receptor transactivation and members of the family of KDWK proteins. Mol. Endocrinol. 14: 1010-1027.
5. Zeng, H., et al. 2000. Genomic organization of human GMEB-1 and rat GMEB-2: structural conservation of two multifunctional proteins. Nucleic Acids Res. 28: 1819-1829.
6. Jimenez-Lara, A.M., et al. 2000. Cloning of a mouse glucocorticoid modulatory element binding protein, a new member of the KDWK family. FEBS Lett. 468: 203-210.
7. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607451. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
8. Surdo, P.L., et al. 2003. Crystal structure and nuclear magnetic resonance analyses of the SAND domain from glucocorticoid modulatory element binding protein-1 reveals deoxyribonucleic acid and zinc binding regions. Mol. Endocrinol. 17: 1283-1295.
9. Chen, J., et al. 2004. Structure/activity relationships for GMEB-2: the second member of the glucocorticoid modulatory element-binding complex. Biochemistry 43: 245-255.

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.

CHROMOSOMAL LOCATION

Genetic locus: GMEB2 (human) mapping to 20q13.33.

PRODUCT

GMEB-2 (h): 293 Lysate represents a lysate of human GMEB-2 transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

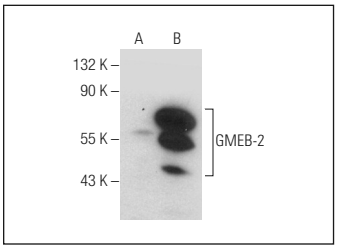
APPLICATIONS

GMEB-2 (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive GMEB-2 antibodies .Recommended use: 10-20 µl per lane.

Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

GMEB-2 (364C1a): sc-81093 is recommended as a positive control antibody for Western Blot analysis of enhanced human GMEB-2 expression in GMEB-2 transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

DATA



GMEB-2 (364C1a): sc-81093. Western blot analysis of GMEB-2 expression in non-transfected: sc-117752 (**A**) and human GMEB-2 transfected: sc-114627 (**B**) 293T whole cell lysates.

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.