SANTA CRUZ BIOTECHNOLOGY, INC.

GMEB-1 (LL-18): sc-100753

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

GMEB-1 (glucocorticoid modulatory element-binding protein-1), also known as PIF p96 (parvovirus initiation factor p96), is a 573 amino acid protein that contains one SAND domain and is a member of the KDWK family of combinatorial transcription modulators. Localized to both the cytoplasm and the nucleus, GMEB-1 forms a heterodimer with GMEB-2 (glucocorticoid modulatory element-binding protein-2) and, once associated with GMEB-2, plays a key role in parvovirus DNA replication. In addition, GMEB-1 functions alone as a *trans*-acting factor that, by binding to glucocorticoid modulatory elements (GMEs) in TAT (tyrosine aminotransferase) promoters, increases intracellular sensitivity to glucocorticoid concentrations. GMEB-1 also interacts with initiator procaspases and, via this interaction, can inhibit caspase-induced apoptosis. Due to alternative splicing events, GMEB-1 is expressed as two isoforms.

REFERENCES

1. Oshima, H., et al. 1995. The factor binding to the glucocorticoid modulatory element of the tyrosine aminotransferase gene is a novel and ubiquitous heteromeric complex. J. Biol. Chem. 270: 21893-21901.
2. Christensen, J., et al. 1999. Two new members of the emerging KDWK family of combinatorial transcription modulators bind as a heterodimer to flexibly spaced PuCGPy half-sites. Mol. Cell. Biol. 19: 7741-7750.
3. Thériault, J.R., et al. 1999. Cloning and characterization of hGMEB-1, a novel glucocorticoid modulatory element binding protein. FEBS Lett. 452: 170-176.
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. Burnett, E., et al. 2001. A consensus DNA recognition motif for two KDWK transcription factors identifies flexible-length, CpG-methylation sensitive cognate binding sites in the majority of human promoters. J. Mol. Biol. 314: 1029-1039.

CHROMOSOMAL LOCATION

Genetic locus: GMEB1 (human) mapping to 1p35.3.

SOURCE

GMEB-1 (LL-18) is a mouse monoclonal antibody raised against recombinant GMEB-1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

GMEB-1 (LL-18) is recommended for detection of GMEB-1 of 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), immunohistochemistry (including paraffin-embedded sections) (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 GMEB-1 siRNA (h): sc-88666, GMEB-1 shRNA Plasmid (h): sc-88666-SH and GMEB-1 shRNA (h) Lentiviral Particles: sc-88666-V.

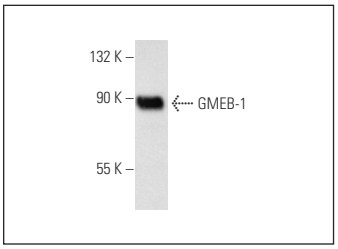
Molecular Weight of GMEB-1: 85 kDa.

Positive Controls: HeLa nuclear extract: sc-2120 or Hs 181 Tes whole cell lysate: sc-364779.

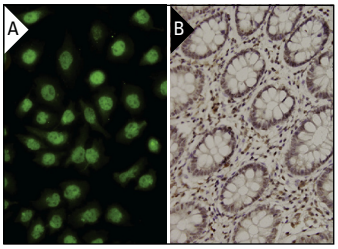
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



GMEB-1 (LL-18): sc-100753. Western blot analysis of GMEB-1 expression in HS 181.Tes whole cell lysate.



GMEB-1 (LL-18): sc-100753. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human colon tissue showing nuclear and cytoplasmic localization (**B**).

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.