## SANTA CRUZ BIOTECHNOLOGY, INC.

# GMEB-1 (H-2): sc-376775



## 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.
- Thériault, J.R., et al. 1999. Cloning and characterization of hGMEB1, a novel glucocorticoid modulatory element binding protein. FEBS Lett. 452: 170-176.
- 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.

#### **CHROMOSOMAL LOCATION**

Genetic locus: GMEB1 (human) mapping to 1p35.3; Gmeb1 (mouse) mapping to 4 D2.3.

### SOURCE

GMEB-1 (H-2) is a mouse monoclonal antibody raised against amino acids 225-319 mapping within an internal region of GMEB-1 of mouse origin.

#### PRODUCT

Each vial contains 200  $\mu$ g lgG<sub>1</sub> kappa 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-376775 X, 200  $\mu$ g/0.1 ml.

GMEB-1 (H-2) is available conjugated to agarose (sc-376775 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376775 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376775 PE), fluorescein (sc-376775 FITC), Alexa Fluor<sup>®</sup> 488 (sc-376775 AF488), Alexa Fluor<sup>®</sup> 546 (sc-376775 AF546), Alexa Fluor<sup>®</sup> 594 (sc-376775 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-376775 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-376775 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-376775 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

### APPLICATIONS

GMEB-1 (H-2) is recommended for detection of GMEB-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

GMEB-1 (H-2) is also recommended for detection of GMEB-1 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for GMEB-1 siRNA (h): sc-88666, GMEB-1 siRNA (m): sc-105402, GMEB-1 shRNA Plasmid (h): sc-88666-SH, GMEB-1 shRNA Plasmid (m): sc-105402-SH, GMEB-1 shRNA (h) Lentiviral Particles: sc-88666-V and GMEB-1 shRNA (m) Lentiviral Particles: sc-105402-V.

GMEB-1 (H-2) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of GMEB-1: 85 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, HEL 92.1.7 cell lysate: sc-2270 or Daudi cell lysate: sc-2415.

#### DATA





GMEB-1 (H-2): sc-376775. Western blot analysis of GMEB-1 expression in HeLa nuclear extract (A) and HEL 92.1.7 (B) and Daudi (C) whole cell lysates. Detection reagent used: m-lgG $\kappa$ BP-HRP: sc-516102.

GMEB-1 (H-2): sc-376775. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing nuclear staining of cells in germinal and non-germinal centers.

## SELECT PRODUCT CITATIONS

 An, W., et al. 2019. Glucocorticoid modulatory element-binding protein 1 (GMEB1) interacts with the de-ubiquitinase USP40 to stabilize CFLARL and inhibit apoptosis in human non-small cell lung cancer cells. J. Exp. Clin. Cancer Res. 38: 181.

#### **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.

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