SANTA CRUZ BIOTECHNOLOGY, INC.

GCM1 (M-282): sc-98811

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

GCM1 (glial cells missing homolog 1), also known as GCMA or hGCMa, is a 436 amino acid human homolog of the *Drosophila* glial cells missing protein (gcm). Localized to the nucleus and expressed specifically in placenta, GCM1 functions as a transcription factor that binds the novel sequence (A/G)CCCG-CAT and, through this binding, regulates placental development. Additionally, GCM1 is thought to regulate syncytin SU-mediated trophoblastic fusion, an event that produces syncytiotrophoblast structures which, in turn, function as the outermost covering of the placental villi. GCM1 contains one N-terminal GCM (glial cell missing) DNA-binding domain, a conserved 150 amino acid residue that conveys DNA-binding activity for a variety of transcription factors involved in developmental processes.

REFERENCES

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2. Yamada, K., et al. 1999. A GCM motif protein is involved in placenta-specific expression of human aromatase gene. J. Biol. Chem. 274: 32279-32286.
3. Yamada, K., et al. 2000. Genomic organization, chromosomal localization, and the complete 22 kb DNA sequence of the human GCMa/ GCM1, a placenta-specific transcription factor gene. Biochem. Biophys. Res. Commun. 278: 134-139.
4. Yu, C., et al. 2002. GCMa regulates the syncytin-mediated trophoblastic fusion. J. Biol. Chem. 277: 50062-50068.
5. Baczyk, D., et al. 2004. Complex patterns of GCM1 mRNA and protein in villous and extravillous trophoblast cells of the human placenta. Placenta 25: 553-559.
6. Chang, C.W., et al. 2005. Stimulation of GCMa transcriptional activity by cyclic AMP/protein kinase A signaling is attributed to CBP-mediated acetylation of GCMa. Mol. Cell. Biol. 25: 8401-8414.
7. Knerr, I., et al. 2005. Stimulation of GCMa and syncytin via cAMP mediated PKA signaling in human tropho-blastic cells under normoxic and hypoxic conditions. FEBS Lett. 579: 3991-3998.
8. Chuang, H.C., et al. 2006. Histone deacetylase 3 binds to and regulates the GCMa transcription factor. Nucleic Acids Res. 34: 1459-1469.

CHROMOSOMAL LOCATION

Genetic locus: Gcm1 (mouse) mapping to 9 E1.

SOURCE

GCM1 (M-282) is a rabbit polyclonal antibody raised against amino acids 155-436 mapping at the C-terminus of GCM1 of mouse origin.

STORAGE

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

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-98811 X, 200 µg/0.1 ml.

APPLICATIONS

GCM1 (M-282) is recommended for detection of GCM1 of mouse and rat 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).

Suitable for use as control antibody for GCM1 siRNA (m): sc-75118, GCM1 shRNA Plasmid (m): sc-75118-SH and GCM1 shRNA (m) Lentiviral Particles: sc-75118-V.

GCM1 (M-282) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

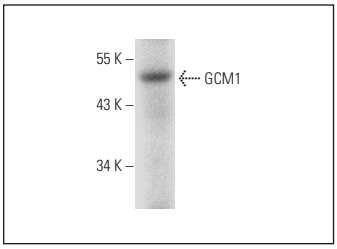
Molecular Weight of GCM1: 49 kDa.

Positive Controls: mouse brain extract: sc-2235.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



GCM1 (M-282): sc-98811. Western blot analysis of GCM1 expression in mouse heart tissue extract.

RESEARCH USE

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