SANTA CRUZ BIOTECHNOLOGY, INC.

GCM2 (C-2): sc-514736

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Glial cells missing homolog 2 (GCM2), also known as chorion-specific transcription factor GCMb, is a 506 amino acid nuclear protein. GCM2 is a transcription factor that acts as an essential regulator of parathyroid development. GCM2 is also thought to mediate the effect of calcium on parathyroid hormone expression and secretion in parathyroid cells. GCM2 contains one N-terminal GCM domain, which has DNA binding activity. Mutations of the gene that encodes GCM2 are associated with hypoparathyroidism, an autosomal recessive condition characterized by hypocalcemia and hyperphosphatemia.

REFERENCES

1. Kebebew, E., et al. 2004. GCMB gene, a master regulator of parathyroid gland development, expression, and regulation in hyperparathyroidism. Surgery 136: 1261-1266.
2. Thomee, C., et al. 2005. GCMB mutation in familial isolated hypoparathyroidism with residual secretion of parathyroid hormone. J. Clin. Endocrinol. Metab. 90: 2487-2492.
3. Baumber, L., et al. 2005. Identification of a novel mutation disrupting the DNA binding activity of GCM2 in autosomal recessive familial isolated hypoparathyroidism. J. Med. Genet. 42: 443-448.
4. Liu, Z., et al. 2007. Gcm2 is required for the differentiation and survival of parathyroid precursor cells in the parathyroid/thymus primordia. Dev. Biol. 305: 333-346.
5. Soustelle, L. and Giangrande, A. 2007. Novel gcm-dependent lineages in the postembryonic nervous system of *Drosophila melanogaster*. Dev. Dyn. 236: 2101-2108.
6. Maret, A., et al. 2008. Analysis of the GCM2 gene in isolated hypoparathyroidism: a molecular and biochemical study. J. Clin. Endocrinol. Metab. 93: 1426-1432.
7. Mannstadt, M., et al. 2008. Dominant-negative GCMB mutations cause an autosomal dominant form of hypoparathyroidism. J. Clin. Endocrinol. Metab. 93: 3568-3576.

CHROMOSOMAL LOCATION

Genetic locus: GCM2 (human) mapping to 6p24.2; Gcm2 (mouse) mapping to 13 A3.3.

SOURCE

GCM2 (C-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 25-45 near the N-terminus of GCM2 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 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-514736 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-514736 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

GCM2 (C-2) is recommended for detection of GCM2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 GCM2 siRNA (h): sc-75119, GCM2 siRNA (m): sc-75120, GCM2 shRNA Plasmid (h): sc-75119-SH, GCM2 shRNA Plasmid (m): sc-75120-SH, GCM2 shRNA (h) Lentiviral Particles: sc-75119-V and GCM2 shRNA (m) Lentiviral Particles: sc-75120-V.

GCM2 (C-2) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

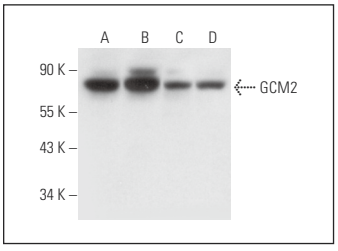
Molecular Weight of GCM2: 65-70 kDa.

Positive Controls: EOC 20 whole cell lysate: sc-364187, F9 cell lysate: sc-2245 or AMJ2-C8 whole cell lysate: sc-364366.

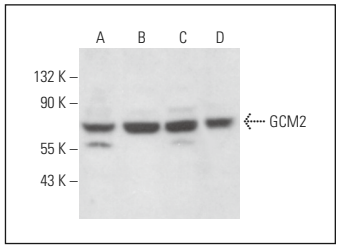
RECOMMENDED SUPPORT REAGENTS

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.

DATA



GCM2 (C-2): sc-514736. Western blot analysis of GCM2 expression in AMJ2-C8 (**A**), EOC 20 (**B**), BC_3H1 (**C**) and F9 (**D**) whole cell lysates.



GCM2 (C-2): sc-514736. Western blot analysis of GCM2 expression in NTERA-2 cl.D1 (**A**), MOLT-4 (**B**), HEK293 (**C**) and RPE-J (**D**) whole cell lysates.

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.