

MYCBP (2E9): sc-517020

BACKGROUND

The c-Myc proto-oncogene plays a significant role in cell proliferation, differentiation, transformation and apoptosis. A novel c-Myc binding protein MYCBP (also designated AMY-1) binds to the transactivation domain of c-Myc and stimulates the activation of E-box-dependent transcription. MYCBP translocates from the cytoplasm to the nucleus during S phase when increased expression of c-Myc occurs. MYCBP has also been shown to associate with AKAP 149 and AKAP 84 in mitochondria of somatic cells and sperm, which suggests a role for MYCBP in spermatogenesis. In addition, MYCBP localizes to the *trans*-Golgi network (TGN) and the nucleus, where it binds the high molecular weight guanine-nucleotide exchange factor BIG2 *in vivo* to coordinate ADP-ribosylation factor-mediated membrane trafficking and signaling pathways.

REFERENCES

1. Taira, T., et al. 1998. AMY-1, a novel c-Myc binding protein that stimulates transcription activity of c-Myc. *Genes Cells* 3: 549-565.
2. Furusawa, M., et al. 2000. AMY-1 is a trigger for the erythrocyte differentiation of K562 cells. *Int. J. Oncol.* 16: 339-345.
3. Furusawa, M., et al. 2001. AMY-1, a c-Myc-binding protein, is localized in the mitochondria of sperm by association with S-AKAP 84, an anchor protein of cAMP-dependent protein kinase. *J. Biol. Chem.* 276: 36647-36651.
4. Yukitake, H., et al. 2002. AMAP-1, a novel testis-specific AMY-1-binding protein, is differentially expressed during the course of spermatogenesis. *Biochim. Biophys. Acta* 1577: 126-132.
5. Yukitake, H., et al. 2002. AAT-1, a novel testis-specific AMY-1-binding protein, forms a quaternary complex with AMY-1, A-kinase anchor protein 84, and a regulatory subunit of cAMP-dependent protein kinase and is phosphorylated by its kinase. *J. Biol. Chem.* 277: 45480-45492.
6. Furusawa, M., et al. 2002. AMY-1 interacts with S-AKAP 84 and AKAP 95 in the cytoplasm and the nucleus, respectively, and inhibits cAMP-dependent protein kinase activity by preventing binding of its catalytic subunit to A-kinase-anchoring protein (AKAP) complex. *J. Biol. Chem.* 277: 50885-50892.

CHROMOSOMAL LOCATION

Genetic locus: MYCBP (human) mapping to 1p34.3; Mycbp (mouse) mapping to 4 D2.2.

SOURCE

MYCBP (2E9) is a mouse monoclonal antibody raised against amino acids 1-103 representing full length MYCBP of human origin.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

MYCBP (2E9) is recommended for detection of MYCBP of mouse, rat and 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).

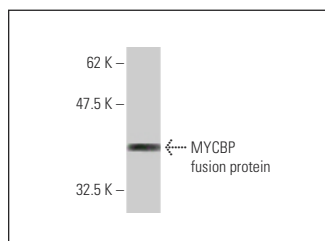
Suitable for use as control antibody for MYCBP siRNA (h): sc-88098, MYCBP siRNA (m): sc-149734, MYCBP shRNA Plasmid (h): sc-88098-SH, MYCBP shRNA Plasmid (m): sc-149734-SH, MYCBP shRNA (h) Lentiviral Particles: sc-88098-V and MYCBP shRNA (m) Lentiviral Particles: sc-149734-V.

Molecular Weight of MYCBP: 11 kDa.

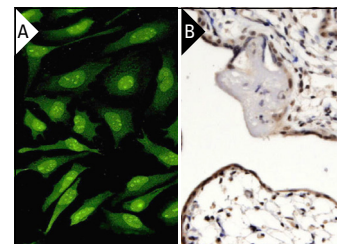
RECOMMENDED SUPPORT REAGENTS

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



MYCBP (2E9): sc-517020. Western blot analysis of human recombinant MYCBP fusion protein.



MYCBP (2E9): sc-517020. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing nuclear and cytoplasmic staining of trophoblastic cells (B).

SELECT PRODUCT CITATIONS

1. Zhang, Y., et al. 2024. Circ_0002669 promotes osteosarcoma tumorigenesis through directly binding to MYCBP and sponging miR-889-3p. *Biol. Direct.* 19: 25.

STORAGE

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