

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

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2. Furusawa, M., Onishi, T., Taira, T., Iguchi-Ariga, S.M. and Ariga, H. 2000. AMY-1 is a trigger for the erythrocyte differentiation of K562 cells. *Int. J. Oncol.* 16: 339-345.
3. Furusawa, M., Ohnishi, T., Taira, T., Iguchi-Ariga, S.M. and Ariga, H. 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., Furusawa, M., Taira, T., Iguchi-Ariga, S.M. and Ariga, H. 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., Furusawa, M., Taira, T., Iguchi-Ariga, S.M. and Ariga, H. 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., Taira, T., Iguchi-Ariga, S.M. and Ariga, H. 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.

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).

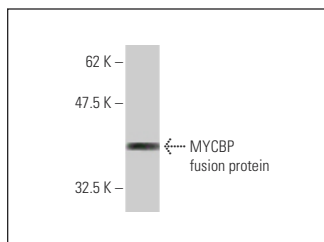
Suitable for use as control antibody for MYCBP siRNA (h): sc-88098, MYCBP siRNA (m): sc-149734, MYCBP shRNA Plasmid (h): sc-88098-SH, MYCBP shRNA Plasmid (m): sc-149734-SH, MYCBP shRNA (h) Lentiviral Particles: sc-88098-V and MYCBP shRNA (m) Lentiviral Particles: sc-149734-V.

Molecular Weight of MYCBP: 11 kDa.

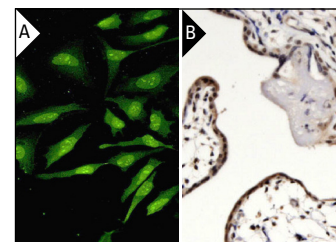
RECOMMENDED SUPPORT REAGENTS

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, 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 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



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).

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.