SANTA CRUZ BIOTECHNOLOGY, INC.

EMSY (5D1): sc-293376

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

EMSY interacts with BRCA2 and plays a role in chromatin remodeling. This interaction has been confirmed in HeLa cells. Overexpression of EMSY strongly correlates with amplification in sporadic breast cancer and higher grade ovarian cancer. The EMSY gene is amplified in 18% of breast cancer cell lines. EMSY amplification is highly correlated with DNA amplification in both cell lines and primary tumors. This amplification is a general sign of poor prognosis and shortened disease-free survival time. EMSY from a wide variety of species has a conserved 80 amino acid sequence at the N-terminus. In irradiated MEFs (mouse embryonic fibroblasts), EMSY was found to migrate to damaged DNA.

REFERENCES

1. Haber, D.A., et al. 2003. The BRCA2-EMSY connection: implications for breast and ovarian tumorigenesis. Cell 115: 507-508.
2. Hughes-Davies, L., et al. 2003. EMSY links the BRCA2 pathway to sporadic breast and ovarian cancer. Cell 115: 523-535.
3. Rodriguez, C., et al. 2004. Amplification of the BRCA2 pathway gene EMSY in sporadic breast cancer is related to negative outcome. Clin. Cancer Res. 10: 5785-5791.
4. Yao, J., et al. 2004. EMSY links breast cancer gene 2 to the "royal family". Breast Cancer Res. 6: 201-203.
5. Livingston, D.M., et al. 2004. EMSY, a BRCA2 partner in crime. Nat. Med. 10: 127-128.
6. Benusiglio, P.R., et al. 2005. Common variation in EMSY and risk of breast and ovarian cancer: a case-control study using HapMap tagging SNPs. BMC Cancer 5: 81.
7. Raouf, A., et al. 2005. Genomic instability of human mammary epithelial cells overexpressing a truncated form of EMSY. J. Natl. Cancer Inst. 97: 1302-1306.
8. Brown, L.A., et al. 2006. Amplification of EMSY, a novel oncogene on 11q13, in high grade ovarian surface epithelial carcinomas. Gynecol. Oncol. 100: 264-270.
9. Huang, Y., et al. 2006. Crystal structure of the HP1-EMSY complex reveals an unusual mode of HP1 binding. Structure 14: 703-712.

CHROMOSOMAL LOCATION

Genetic locus: EMSY (human) mapping to 11q13.5.

SOURCE

EMSY (5D1) is a mouse monoclonal antibody raised against amino acids 1081-1178 of EMSY of human origin.

PRODUCT

Each vial contains 100 µg IgG_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

EMSY (5D1) is recommended for detection of EMSY of 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).

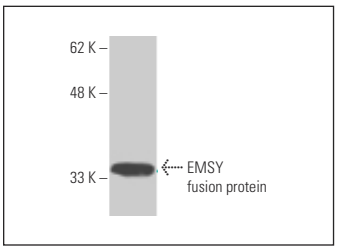
Suitable for use as control antibody for EMSY siRNA (h): sc-45565, EMSY shRNA Plasmid (h): sc-45565-SH and EMSY shRNA (h) Lentiviral Particles: sc-45565-V.

Molecular Weight of EMSY: 141 kDa.

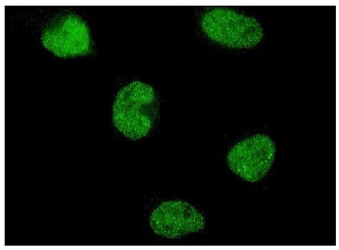
RECOMMENDED SUPPORT REAGENTS

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



EMSY (5D1): sc-293376. Western blot analysis of human recombinant EMSY fusion protein.



EMSY (5D1): sc-293376. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.