SANTA CRUZ BIOTECHNOLOGY, INC.

BORIS (42.54): sc-135729



BACKGROUND

Brother of the regulator of imprinted sites (BORIS) is a mammalian transcription factor that is paralogous to the CCCTC-binding factor (CTCF), an ubiquitous 11 zinc finger (ZF) protein that organizes epigenetically controlled chromatin insulators that regulate imprinted genes in soma. BORIS is a 663 amino acid DNA binding protein. It is expressed at high levels in the testis and in low levels in the prostate in a mutually exclusive pattern that correlates with the resetting of methylation marks during male germ cell differentiation. Abnormal expression of BORIS is linked to many types of cancer including breast, prostate, ovary, gastric, liver, endometrial, glia, colon and esophagus.

REFERENCES

- Klenova, E.M., Morse, H.C., Ohlsson, R. and Lobanenkov, VV. 2002. The novel BORIS + CTCF gene family is uniquely involved in the epigenetics of normal biology and cancer. Semin. Cancer Biol. 12: 399-414.
- 2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607022. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Vatolin, S., Abdullaev, Z., Pack, S.D., Flanagan, P.T., Custer, M., Loukinov, D.I., Pugacheva, E., Hong, J.A., Morse, H., Schrump, D.S., Risinger, J.I., Barrett, J.C. and Lobanenkov, V.V. 2005. Conditional expression of the CTCFparalogous transcriptional factor BORIS in normal cells results in demethylation and derepression of MAGE-A1 and reactivation of other cancer-testis genes. Cancer Res. 65: 7751-7762.
- 4. Hong, J.A., Kang, Y., Abdullaev, Z., Flanagan, P.T., Pack, S.D., Fischette, M.R., Adnani, M.T., Loukinov, D.I., Vatolin, S., Risinger, J.I., Custer, M., Chen, G.A., Zhao, M., Nguyen, D.M., Barrett, J.C., Lobanenkov, V.V. and Schrump, D.S. 2005. Reciprocal binding of CTCF and BORIS to the NY-ESO-1 promoter coincides with derepression of this cancer-testis gene in lung cancer cells. Cancer Res. 65: 7763-7774.
- D'Arcy, V., Abdullaev, Z.K., Pore, N., Docquier, F., Torrano, V., Chernukhin, I., Smart, M., Farrar, D., Metodiev, M., Fernandez, N., Richard, C., Delgado, M.D., Lobanenkov, V. and Klenova, E. 2006. The potential of BORIS detected in the leukocytes of breast cancer patients as an early marker of tumorigenesis. Clin. Cancer Res. 12: 5978-5986.
- Hoffmann, M.J., Müller, M., Engers, R. and Schulz, W.A. 2006. Epigenetic control of CTCFL/BORIS and Oct-4 expression in urogenital malignancies. Biochem. Pharmacol. 72: 1577-1588.
- 7. Looijenga, L.H., Hersmus, R., Gillis, A.J., Pfundt, R., Stoop, H.J., van Gurp, R.J., Veltman, J., Beverloo, H.B., van Drunen, E., van Kessel, A.G., Pera, R.R., Schneider, D.T., Summersgill, B., Shipley, J., McIntyre, A., van der Spek, P., Schoenmakers, E. and Oosterhuis, J.W. 2006. Genomic and expression profiling of human spermatocytic seminomas: primary spermatocyte as tumorigenic precursor and DMRT1 as candidate chromosome 9 gene. Cancer Res. 66: 290-302.

STORAGE

Store at 4° C, **D0 NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

CHROMOSOMAL LOCATION

Genetic locus: CTCFL (human) mapping to 20q13.31.

SOURCE

BORIS (42.54) is a mouse monoclonal antibody raised against a mixture of two peptides corresponding to amino acids 74-86 and 224-235 of BORIS of human origin.

PRODUCT

Each vial contains 200 μ g lgG₁ 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-135729 X, 200 μ g/0.1 ml.

APPLICATIONS

BORIS (42.54) is recommended for detection of BORIS of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for BORIS siRNA (h): sc-60279, BORIS shRNA Plasmid (h): sc-60279-SH and BORIS shRNA (h) Lentiviral Particles: sc-60279-V.

BORIS (42.54) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of BORIS: 76 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.

RESEARCH USE

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

PROTOCOLS

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