

BORIS (D-13): sc-51037

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, glioma, colon and esophagus.

REFERENCES

1. Klenova, E.M., et al. 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/>
3. Vatolin, S., et al. 2005. Conditional expression of the CTCF-paralogous 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., et al. 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.
5. D'Arcy, V., et al. 2006. The potential of BORIS detected in the leukocytes of breast cancer patients as an early marker of tumorigenesis. *Clin. Cancer Res.* 12 (Pt 1): 5978-5986.
6. Hoffmann, M.J., et al. 2006. Epigenetic control of CTCF/BORIS and OCT4 expression in urogenital malignancies. *Biochem. Pharmacol.* 72: 1577-1588.

CHROMOSOMAL LOCATION

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

SOURCE

BORIS (D-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of BORIS of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-51037 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

BORIS (D-13) is recommended for detection of BORIS 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) 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 (D-13) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

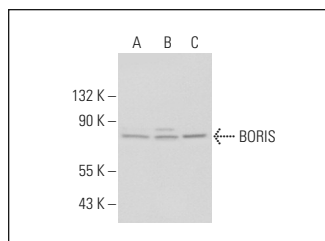
Molecular Weight of BORIS: 76 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Jurkat whole cell lysate: sc-2204 or U-251-MG whole cell lysate: sc-364176.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



BORIS (D-13): sc-51037. Western blot analysis of BORIS expression in K-562 (A), Jurkat (B) and U-251-MG (C) whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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